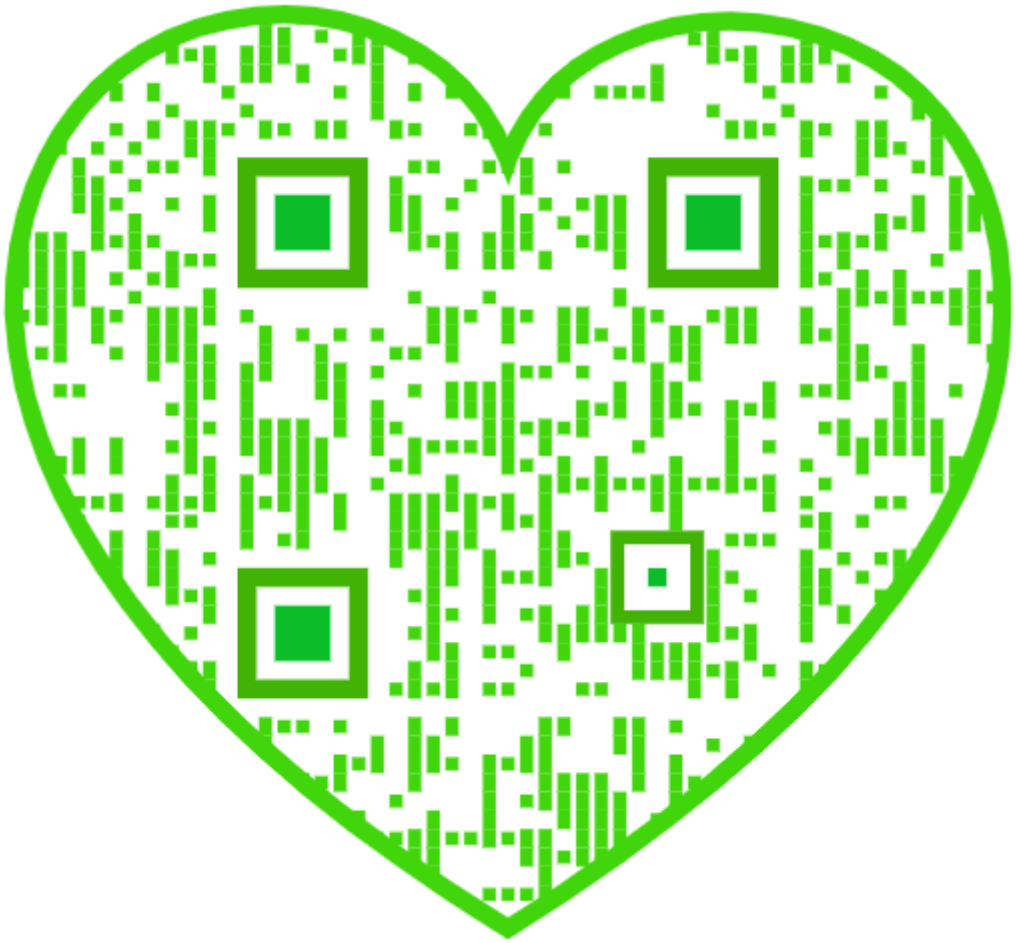

ARCHITECT

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ENGINEER

OCTOBER, 1940

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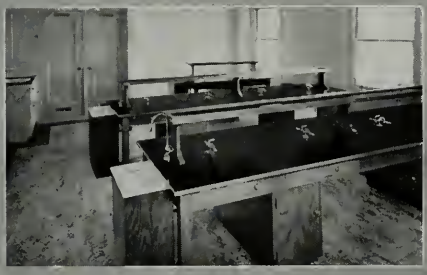

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Floors and Walls

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RUNNING FIRE

By MARK DANIELS

• *THE KERNEL*

The Standard Dictionary defines architecture as "The function of skill in architectural design to combine in a harmonious scheme the independent and often **hostile** requirements." Ah, yes—Hostile requirements. How well we know them! A Mansard roof on a one story house; a $30,000 house on a $5,000 budget; nine doors in a 20' room. These things, and many others, cannot be done until some one discovers a way to get three pints of water into a quart bottle, although a good architect can come closer to the solution than the owner and his kibitzing friends. But the real nubbin, the real kernel, is how will the darn thing look? Architecture is of such antiquity that we are now cursed, like the law, with a plethora of precedents. We have arrived at a stage where, when we are confronted with a job, we must learn from our clients whether the house is to be French, Italian, English or Early American. We then dig into precedents for details.

That is all well enough, but when you delve to the bottom you will find that architecture of all periods and styles is reduced to a matter of taste. Good architecture in any period or style will be found to be, fundamentally, just good taste. Styles and ornament change. Good taste runs on through the ages although at times it runs very low. It is conceivable that a man who never saw any of the famous styles may design and build himself a house of real beauty and charm. If he does, it will be accomplished through the exercise of good taste alone. Some of the most powerful and beautiful writing of the past century has been penned by authors who threw away the book of rules. The same is becoming true in architecture. The kernel is the secret of good taste.

• *THE TWO-GUM MAN*

For several months I have marveled at the endurance of the gum chewing elevator man in a neighboring building. He snaps and pops like winter static as he rises and descends. One day I asked him if he ever grew tired of his gum and he replied, "Sure. But when I do I shift to this kind," and he pulled out a handful of gum sticks of two kinds of wrapping. "Try one," he said, "They're both swell."

If he ever gets a vacation I hope he will go to the Sierras and spend a month practicing not chewing gum.

• *THE GADGETEERS*

If houses were built today as simple and with as few gadgets as were the houses of 60 years ago, they would not cost a great deal more than they did then. But the world has made great strides in the last 100 years. Much of what is now built into the houses was formerly classed as furniture. For lamps we have fixtures; bath tubs are part of the house; furnaces are built in; the house is wired for phone, radio and light; and gas lines are installed for cooking. All are now part of the house cost. This is what we are pleased to call progress, and as such is fair enough.

But now comes a period of gadgets that threaten the very life of home building. They are taking on the character of the algae that finally fill the lake that bears them. They are the fifth column in the forces of the domestic architect. To enumerate them would take the remaining pages of this issue and heaven help the architect whose client gets even a partial list of them.

What next? Will we have disappearing fireplaces, over head gas stoves and hot and cold clam chowder in every bath room? Perhaps it is best that we do, for then we can go back to nature and sleep in the garden.

• *SOLACE*

Casting about for comfort I turned to the Book of Job. A half hour of reading finally bored me. What did Job know about troubles? What are a few boils? But, of course, the profession of architecture had not been established in his time.

• *MEDITATION*

I sipped my Old Fashioned and tried to make up a rhyme about colic and bucolic, but the only words I could think of were frolic and apostolic. The nickelodeon was playing "Where Was I?" when the Little Man placed his cane on the bar rail and peered over my shoulder. "Thought induces immorality," he remarked.

I looked at him and he looked at the O'Brien and the O'Brien brought him a highball. "The development of the mind and the arts," The Little Man continued, "leads to the decline of civilization. Great nations reach a peak of culture and become sophisticated hypocrites. A strong armed, unintelligent and illiterate race desires the artistic achievements of the degenerate nation and takes them according to their education of force. Greece developed the golden age of Pericles only to be hoisted on its own petard of weakness. The revilified orgies of the Romans resulted from an overstimulation of the mental processes and led to desire on the part of the Barbarians. History shows us that the strong tend to think and by thinking become weak. Weakness leads to excesses and excesses lead to defeat. Sayings like "Shirtsleeves to shirtsleeves in three generations" are typical of the warnings people see and don't follow. Romulus and Remus were strong because of hardships, and they founded Rome. Rome founded Nero, and eventually the Roman Empire ceased. Many of our great literateurs were weak in morals and strong in thought—ones like Sappho, Petronius and Rabelais add spice to life and decadence to civilization. Therefore, you are immoral because you are using your mind."

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ARCHITECT AND ENGINEER

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LOOKING AHEAD

With the closing of the Golden Gate International Exposition and simultaneously the Art Museum on Treasure Island, the San Francisco Art Association has already started plans for furthering the interests of art in the San Francisco Bay region. Interest stimulated by the Exposition's great exhibitions must be continued and, furthermore, there is apparent need for renewal and fresh enterprise in art in San Francisco, due in a measure to these anxious times . . . times when one should rally with increased loyalty to the enduring values of humanity.

New and special activities and opportunities will mark the season 1940-1941. A schedule of outstanding exhibitions is now in process of arrangement, including a fine Rouault exhibition.

60TH ANNUAL PAINTING EXHIBIT

Following a preview for members, the 60th Annual Exhibition of Oil Paintings, Tempera on Panel and Sculpture, of the San Francisco Art Association, opened to the public at San Francisco Museum of Art on September 18. The exhibition, one of the most important artistic events in the Bay Region, will continue at the Museum in the Civic Center through most of October.

Of nearly 1,000 works submitted by artists from all over the country, the jury selected 215 to be shown in the exhibit. While the majority of the works come from San Francisco and near points, nearly all of the states are represented.

ANNE BREMER PRIZE AWARDS

The Anne Bremer Memorial Prize for figure or landscape, of $200, has been awarded to Leah Rinne Hamilton of San Francisco for "An Old Orchard," while Copeland Burg of Chicago received the Anne Bremer Memorial Prize for still life, of $100. Both prizes are offered by Mr. Albert M. Bender. The Parilia Purchase Prize for painting, amounting to $250 went to Matthew Barnes, San Francisco, for "Lake Merced"; the Parilia Purchase Prize for sculpture, also $250, was won by Zygmund Sazevich, San Francisco, for his terrazo, "Mississippi."

Marie Gleason Cruess of Berkeley was awarded the Artists' Fund Prize of $75 for "Bergen Fish Market." The Edgar Walter Memorial Prize for sculpture was won by Richard O'Hanlon of Mill Valley, California, for his stone "Buffalo." Everett Spruce of Dallas, Texas, won the William W. Crocker Prize of $100 for a landscape with "West Texas Mesa." The John I. Walter Memorial Prize ($150) went to Dr. John I. Tufts of Berkeley for his oil, "Flowers."

CREATIONS IN SOAP

The skillful hands of amateur American sculptors turned ordinary pieces of soap into cash to the tune of $2,200, by successfully competing for prizes in the sixteenth annual nationwide soap carving contest. Over 100 awards, ranging from $200 to $10 went to winners in 21 states.

First among the contestants was Bert Sharkey of 33 Lincoln Terrace, Yonkers, N.Y., who converted a ten-cent cake of white soap into a carving of tiny hands lifted in supplication, and won the $200 prize in the Advanced Amateur class for those over 21 years of age.

Executed in white soap, these two pieces won cash awards for their creators in the Senior Class in the annual competition for small sculptures in white soap. They are: Left—Scrubwoman (third prize) by Frank Garibaldi of 332 John Street, Elizabeth, N. J.; Right—Lincoln (second prize) by Fred Press of 121 Chambers Street, Boston, Mass.

The prize-winning sculptures were exhibited in a Fifth Avenue show window in New York City from September 7th to 13th. The exhibit has since been routed for display in key cities throughout the country.

Pacific Coast awards were made to Thos. E. Stimson, Los Angeles, and Mrs. Jean W. Petite, Seattle, both of whom received honorable mention in the Advanced Amateur class; Shirley Rice, San Leandro, honorable mention in Senior class; Helen Newman, Topaz, and Richard Hooker, Lompoc, Junior class.

Harry W. Corbett and E. J. Kahn were the architects serving on the Jury of Award.

THE CHALLENGE

In her comments of the recent National Convention of the American Federation of Arts, held in San Francisco, Mildred Rosenthal, editor of the Art Association Bulletin, had this to say about the meeting which, by the way, was the first held in San Francisco in 31 years:

"A summary of the convention, in retrospect, brings into clear relief its accomplishments and shortcomings. Like most gatherings of similar character, its most important function was the opportunity it presented for personal contacts and exchange of ideas. Names that we had so often met in print took on the vitality and force of the personalities that bear them. And yet, in this gathering of men and women from every section of United States, all striving for the preservation and development of Art in our country, the convention disbanded without general discussion or forum. There was much that was provocative, introduced through the papers presented, but the challenge was discarded.

"At this particular crisis in American life, we cannot help but consider this as unfortunate. It brought back to us the words of Dr. Montessori when she lectured at the Panama Pacific Exposition in 1915. Speaking entirely upon feeding. If a baby cried, it was nursed. That food could not be digested without time for assimilation did not occur to the mothers of that era.

"We were, in truth, treated to a full banquet. I am afraid we were fed too often. Less food and better assimilation would possibly have nourished us more soundly.

"The convention was a stimulating experience, nevertheless."

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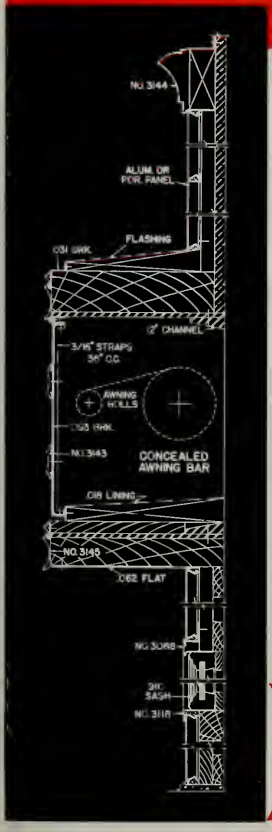

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MODERN BUILDING MATERIALS FOR A LOS ANGELES PLANT

INTERIOR OF PAPER MILK-CONTAINER PLANT OF AMERICAN CAN COMPANY, LOS ANGELES

Double door shown in this view is operated by "electric eye." The modern trend to larger tile is shown in the use of Kraftile 6 x 12 ceramic glazed units. The combination of buff brick and Kraftile's "Monterey Buff" completes a color scheme effective for both beauty and light.

Interesting features of this view of the American Can Company's new paper milk-container plant in Los Angeles, include the use of glass blocks, brick and ceramic glazed units (Kraftile 6 x 12) in 4-inch thickness for partitions and 2-inch thickness for veneering outside walls.

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● Any Sunday afternoon, starting Sept. 29th, tune your radio to your local Columbia Station at 5:00 P.M., E.S.T. You'll hear a new program—"Design for Happiness"—a regular half-hour devoted to the American Home. It tells people of the new effects they can achieve with glass, and urges them to build new homes *now*. It is probably the biggest effort ever put behind glass—should give appreciable impetus to home-building.

In national magazines, in the fall issues of Good Housekeeping and Life, you'll see ads like this one shown, again urging people to build—to "Design for Happiness with Glass."

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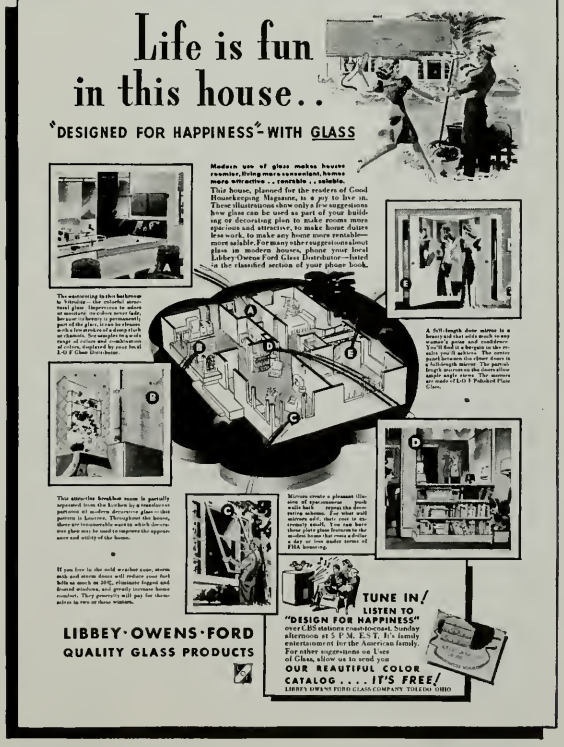

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RELIEF MODEL OF CITY OF SAN FRANCISCO

A RELIEF model of the city of San Francisco, done on a scale of one inch to 100 feet and recently completed by WPA workers was exhibited to tremendously interested audiences at the Golden Gate Exposition. The map, done in remarkable detail, is 41 feet by 37 feet and is so constructed that it is possible to remove whole city blocks or whole sections to make any future changes or additions, thus making it easy to keep up to date.

The construction of a scale model of San Francisco was first contemplated by the City Planning Commission in 1937. A proposal for the project was submitted, approved by the WPA, and work started early in 1938. The City Planning Commission requested the model to be constructed primarily for use in city planning studies, dealing with rezoning, rebuilding, new highway development, etc.

Scale model map of City of San Francisco, mounted on platform, 41 x 37 feet and built to scale of 1 inch to 100 feet.

It is necessary to use a relief map, or model, in order to show visually and realistically, the natural topography, street grades, the general proportions and sizes of building and lots, and the physical relationship of the various parts of the city to each other and to the surrounding areas. The growth of San Francisco was westward from the docking and anchorage facilities of the harbor, and the business and heavy industry reaching out along the lowlands and valleys, the residential construction taking place largely on the adjacent hillsides.

In predicting the trend of future development in San Francisco—extensions of business, industrial and residential areas—it will always be necessary to pay great attention to the physiography of the ground because of its great influence on natural growth. In such planning, the relief map is of the greatest aid because, to the laymen and to many engineers, a contour map does not present the necessary all-inclusive picture of ground formations. Other city departments may well refer to this model at times during planning discussions. The model would furnish an ideal medium for visual presentation of any proposed unit traffic plan, including the marking of one-way streets, over-passes and over-head drives, cutting through blocks, etc.

In order to show the routes of the main highways entering San Francisco, it was decided to include some of San Mateo County —about 7,000 feet south from the city and county line.

The model is set upon a platform measuring 41 feet east and west and 37 1/3 feet north and south. The platform, being of a "knock down" design, can be taken apart or assembled in a short time.

This model is at a scale of one inch to 100 feet, horizontal and vertical, constructed of 138 sections of various sizes and shapes, all marked and are located on the platform and fitting together like a jig-saw puzzle. There the similarity ends, because the sections are on a key map. In laying out the plan of the city it was necessary to use original source data and common surveying practice. The job was somewhat the same as though the city had been entirely destroyed and it was desired to relocate, by surveying methods from existing records, each street intersection, and to plot the streets and sidewalk width and thus arrive at the official dimensions of the property within the city block. All this work was necessary because the mere enlargement of any city map would not have given the accuracy required to make the sections of this model fit properly. Actually, from the official data obtained from the City Department of Engineering, the dimensions of each section were accurately computed, and each corner of each section was located and plotted, by a coordinate system, as so many feet north of a south base-line and so many feet east of a west base-line.

Since the city data is "tied" to the three or four U. S. Coast and Geodetic Survey monuments in the area, the data on these monuments were used in laying out general control and locating the model properly on the platform. It can thus be seen that dimensions on the model are very accurate. It may be of interest to know that the Corps Area Engineer's office at the Presidio has expressed a desire to obtain a vertical photograph of this model as it now stands. The first reason that comes to mind for desiring such a photograph is that weather conditions might make it difficult to get a clear picture from an airplane, if taken at the altitude necessary to get all of San Francisco in a single exposure.

The honey-comb type of construction used in this model of San Francisco, with the city blocks removable from between the streets, is believed to be unique. Such construction is particularly adaptable to a hilly city such as San Francisco. Any block can be removed, buildings added or eliminated, new streets or highways cut through, grades reduced and the blocks, as altered, replaced.

Much useful information was obtained from the work done on other projects of the WPA. Information for modeling the buildings within a city block was obtained by actual field investigation from block maps. Suitable drawings were obtainable for part of the city from work previously done on a Municipal Housing Survey and on a Land Use Survey. A series of 164 over-lapping aerial photographs covering the city was obtained on a contract basis by the City and County for the primary use of the city-wide mapping project in its work for the Assessor's office. A set of enlarged prints was made by WPA for the use of this Scale Model Project, and as a result the model is able to show the inaccessible interiors of city blocks, the scattered buildings in outlying districts, and the wooded areas and placement of trees, otherwise unobtainable.

In residential districts typical houses were used; time and money did not permit of individual modeling except of prominent buildings, or in the downtown business district.

(Turn to Page 10.)

Whatever the job... *Consider Redwood*

Sponsored by Collier's magazine, the House of Ideas is located on the terrace of the International Building in Rockefeller Center, New York City. All outside surfaces are Redwood . . . for Redwood stands the weather. Photo from model.

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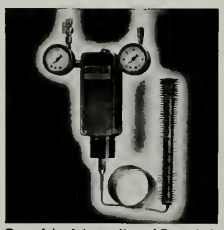

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San Francisco will be the focal point from June 16 to 20, 1941, of a flow of engineers, contractors, manufacturers, industrialists, property owners and others who will be interested in heating, ventilating and air conditioning. The Pacific Heating & Air Conditioning Exposition will be held in the Exposition Auditorium in the San Francisco Civic Center at that time.

Coincidental with this, the summer meeting of the American Society of Heating and Ventilating Engineers and also at the same time the meeting of the Heating, Piping & Air Conditioning Contractors National Association will be taking place.

This exposition will be a special interim showing between the normal sequence of the 6th and 7th International Heating & Ventilating Expositions, the 6th having been held at Cleveland in January of this year and the 7th will be held at the Commercial Museum and the Convention Hall in Philadelphia, January 26 to 30, 1942. It will not disturb the biennial sequence of these expositions.

This exposition will present the largest and most comprehensive showing of air conditioning, heating, ventilating and accessory apparatus and equipment ever seen upon the Pacific Coast, and the western selling organizations are enthusiastic for the educational and selling help which it will give them with their customers and prospects. Their thousands of prospects will be interested in seeing the new equipment with which they have now only remote means of contact.

MODEL OF SAN FRANCISCO

(Continued from Page 8.)

Poplar and sugar pine were the woods used where considerable carving was required. The downtown city blocks were fashioned from single blocks of wood. Wire wool, pieces of sponge, and beet seeds made good looking shrubbery. A quantity of typehouses are being turned over to the Planning Commission with the model, to facilitate their keeping their part of the bargain with the Work Projects Administration, i.e., the maintenance of the model in the future, as San Francisco continues to grow.

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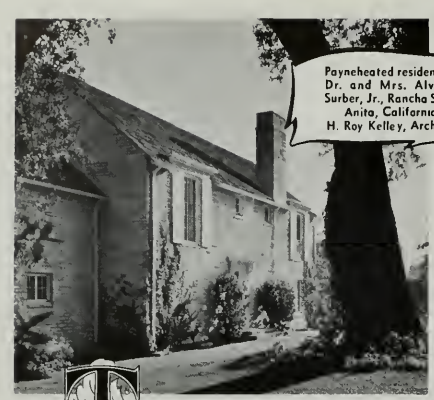
Wm. H. Harrison, architect, designed these two interesting concrete schools. Paul E. Jeffers, structural engineer. Whittier Union High School Auditorium (above) built by J. K. Thomas. Lou Henry Hoover School (right) by J. & B. Construction Co.



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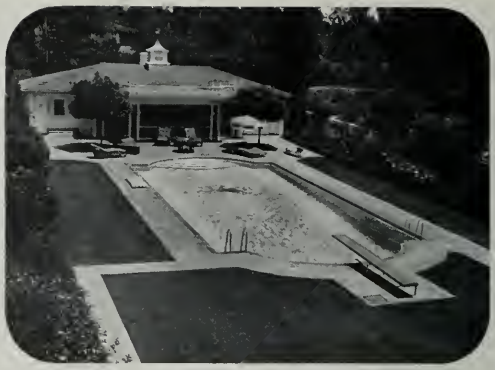

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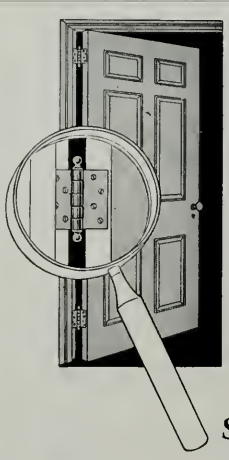

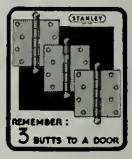

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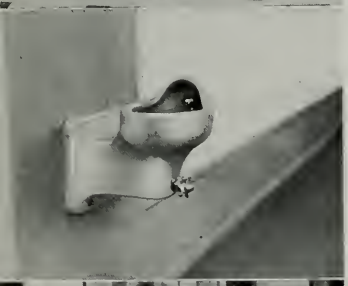
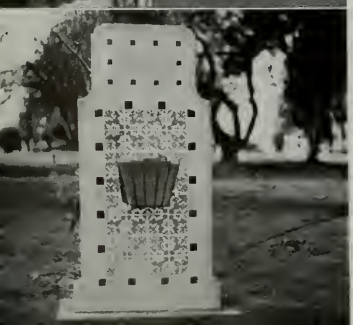


For Schools

For Gas Stations



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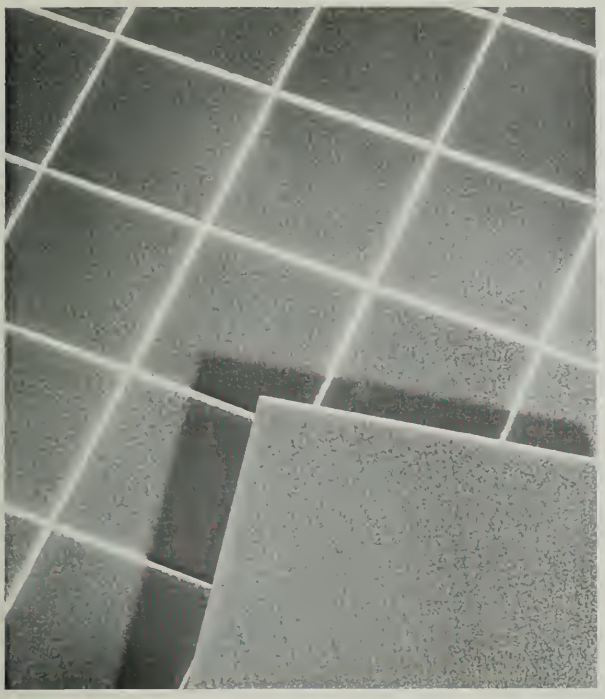

ACTUAL PHOTOGRAPH

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YOUNGSTERS as well as Oldsters are jumpy these days. Things that wouldn't have bothered them at all a generation ago now result in all kinds of peculiar reactions. That explains the thorough study being given to noise elimination in modern building layout.

The new Watrous SILENT-ACTION Flush Valve makes available for the first time a Flush Valve that is not only remarkably silent in operation, but one that will remain silent as the years go by. It remains silent because—for the first time in the history of the industry—it has solved the problem of eliminating flush valve noise without the use of screens, shot, mufflers or other elements which readily become clogged.

Tests made by a nationally-known research laboratory (name on request) show that Watrous SILENT-ACTION eliminates an average of 88.5% of ordinary flush valve noise energy. You *cannot specify a quieter flush valve!*

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You will find complete specification details in Catalog 54, Section 27 of Sweet's Catalog File. We shall also be pleased to mail you a copy of an interesting bulletin "A Scientific Method of Silencing Flush Valves."

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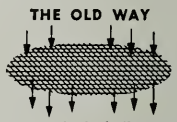
End Flush Valve noise in this new enduring, screenless way

● No longer need disturbing flush valve noise be a problem and an annoyance in any building. Today it is a simple matter to end this noise — effectively, permanently, economically.

How this is accomplished with the new Watrous SILENT-ACTION equipment—as contrasted with old screen-type silencing methods—is told in the two descriptions below.

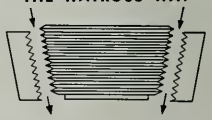
THE OLD WAY



● The old method of silencing flush valves is to pass part or all of the water going to the valve through one or more screens. (Perforated discs or shot pellets also used). The trouble with this method—as the screen on your kitchen faucet will quickly show you—is that screens become clogged and must be cleaned or replaced at frequent intervals.

Also, clogging makes necessary frequent adjustment of the shut-off to keep the valve working properly.

THE WATROUS WAY



● The new method of silencing used in Watrous SILENT-ACTION Flush Valves, is to pass the water between two surfaces having a large number of corrugations or roughened surfaces.

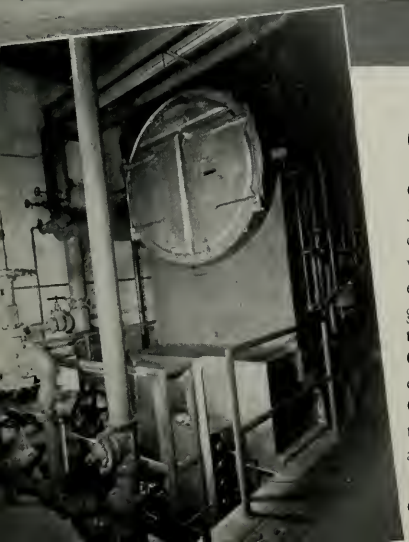
Note there is nothing in this unit which requires replacement and there is ample space for dirt and scale to pass through. As a result, silent operation *stays* silent and there is no need for frequent adjustment or renewal of parts.

Watrous

***SILENT-ACTION* Flush Valves**

THEY PAY FOR THEMSELVES IN THE WATER THEY SAVE

DESIGNED TO DRAW TRADE



Gas heat does its part

Contemporary store design attains unique sales appeal in this building for *Sears Roebuck and Co.*, Los Angeles, by Architect *John Stokes Redden.* ☆ The huge display windows faitly shout, "Come and see." Roof parking invites frequent visits and leisurely shopping. And for the welfare of both customers and employes, there is "the latest" in controlled gas heating. ☆ From an automatic gas boiler, steam forces circulation of hot water through coils which temper the evenly circulated air: Comfortable, healthful, economical! ☆ Your Gas Company invites consultation with its engineers about *your* specifications.

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"THE THREE WISE MEN"

A wood mosaic mural designed and executed by Aimee Gorham for the Parish House of Trinity Episcopal Church, Portland, Oregon.

Sutton, Whitney & Aandahl, Architects

Sutton, Whitney & Aandahl, Architects

CURRENT TRENDS
IN OREGON ARCHITECTURE

By ROI L. MORIN, A.I.A.

A CASUAL observer may question the hypothesis that a style of architecture and building indigenous to Oregon and the Pacific Northwest is developing but this writer believes diligent study would reveal that such is the case. Oregon architecture is a many-facetted gem, created by individuals differently influenced by the current trends in Scandinavia, the modern Italian movement, the Japanese and by the more familiar English and Colonial ancestry. Moreover, the current work in rich and sunny California makes itself felt to a marked degree.

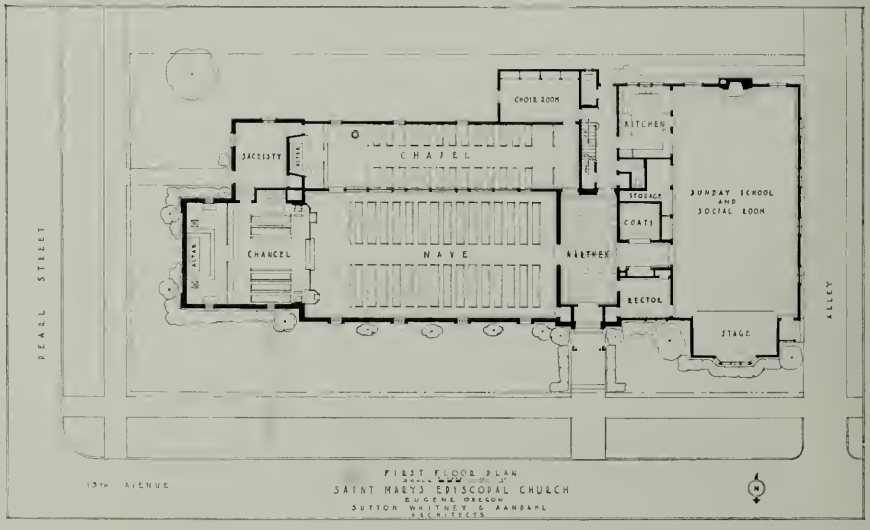
Nevertheless, in spite of these personal and geographical impingements, design in these parts is overwhelmingly influenced by the abundance of economical structural wood, a long season of rainfall, a deep green background without too much sunlight—coupled with a lack of fine clays for brick and tile and a scarcity of rich building stones and metals, and these considerations have more perceptible effect on design than any personal equations.

* * * * *

The modern movement comes in for discussion and experimentation and, in spite of the traditionally conservative nature of the populace hereabouts, more building appears each year with earmarkings of this trend. Local architects have learned that clients will react unfavorably

ST. MARY'S EPISCOPAL CHURCH, EUGENE, OREGON

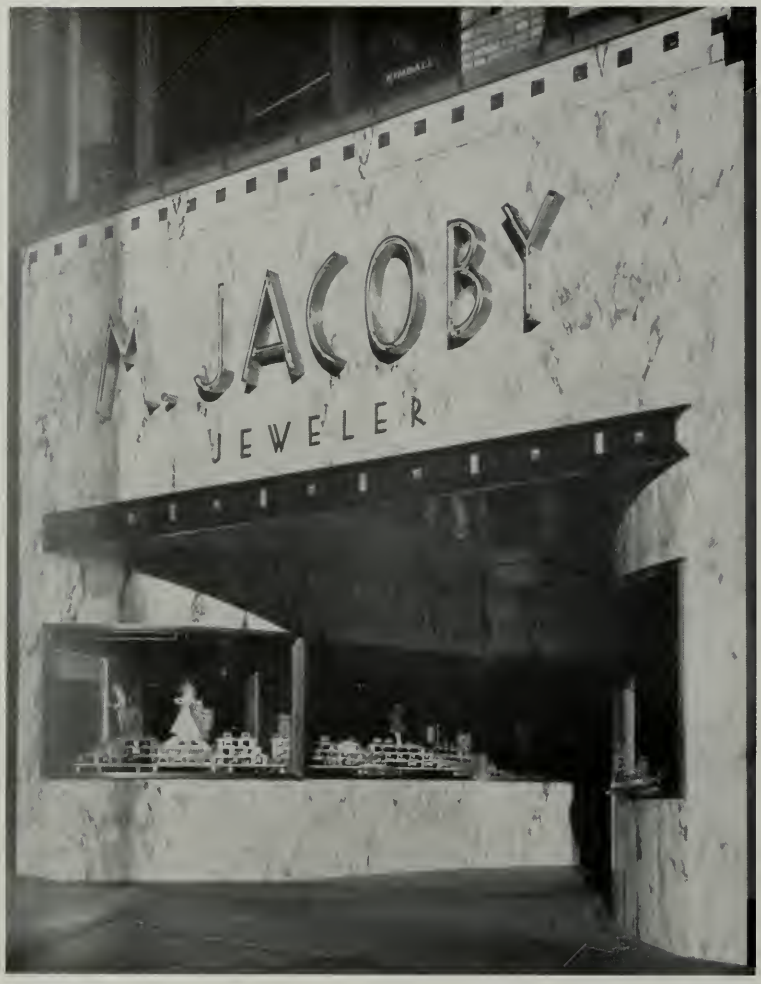
Sutton, Whitney & Aandahl, Architects



INTERIOR OF CHAPEL, ST. MARY'S EPISCOPAL CHURCH, EUGENE, OREGON

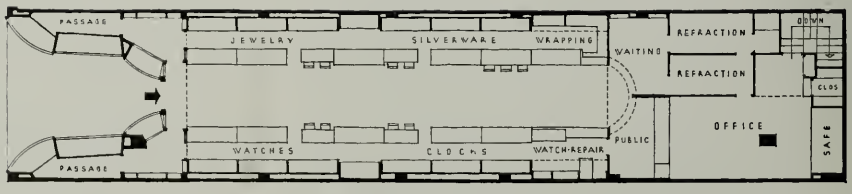
RESIDENCE OF
MR. & MRS. DONALD M. DRAKE
PORTLAND, OREGON

Sutton, Whitney & Aandahl, Architects



Jewelry Shop for
M. Jacoby
Portland, Oregon

Harry A. Herzog
Architect



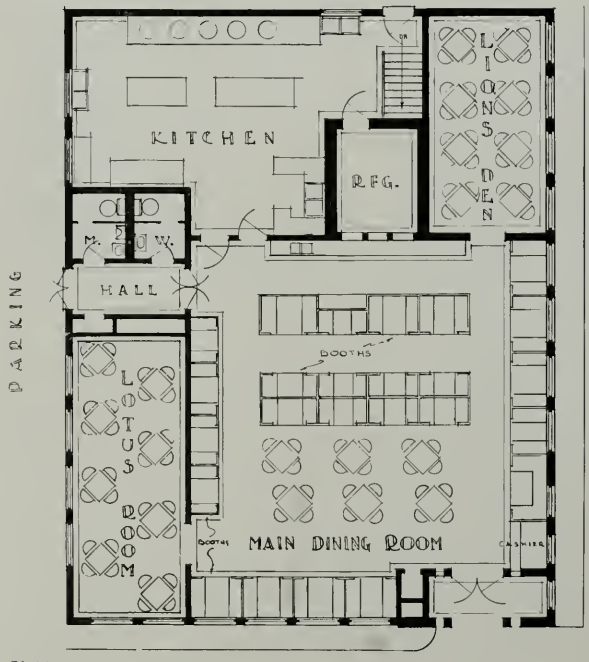
FLOOR PLAN

SCALE IN FEET
0 5 10 15 20

HELEN BERNHARD'S BAKERY SHOP, PORTLAND, OREGON
Richard Sundeleaf, Architect

DETAIL

THE PAGODA RESTAURANT, PORTLAND, OREGON
Johnson, Wallwork & Dukehart, Architects



PLAN

Opposite page, top—Interior of Pagoda Restaurant.

Below—Stafford Jenning's shop and boathouse, Portland, Oregon.

Jos. W. Heiler, Architect

Staff JENNINGS
BOATS, MOTORS & MARINE EQUIPMENT

HEATING PLANT, OREGON STATE CAPITOL GROUP, SALEM, OREGON
Whitehouse & Church, Architects

Oregon State Library
Salem, Oregon

Whitehouse & Church
Architects

REFERENCE ROOM, OREGON STATE LIBRARY, SALEM, OREGON
Whitehouse & Church, Architects

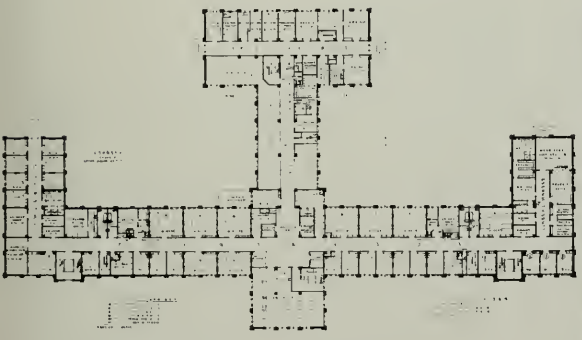
MAIN LOBBY

ALTERATIONS, PACIFIC OUTFITTING CO. BUILDING, PORTLAND, OREGON

Bernard Heims & L. L. Dougan, Associate Architects

BEFORE ALTERATIONS

ST. VINCENT'S HOSPITAL—EAST, PORTLAND, OREGON
Francis B. Jacobberger, Architect



Typical Floor Plan St. Vincent's Hospital—East

Interior—St. Francis Church, Alterations
Portland, Oregon
Francis B. Jacobberger, Architect

A RESIDENCE NEAR PORTLAND, OREGON

Lawrence, Holford & Allyn, Architects

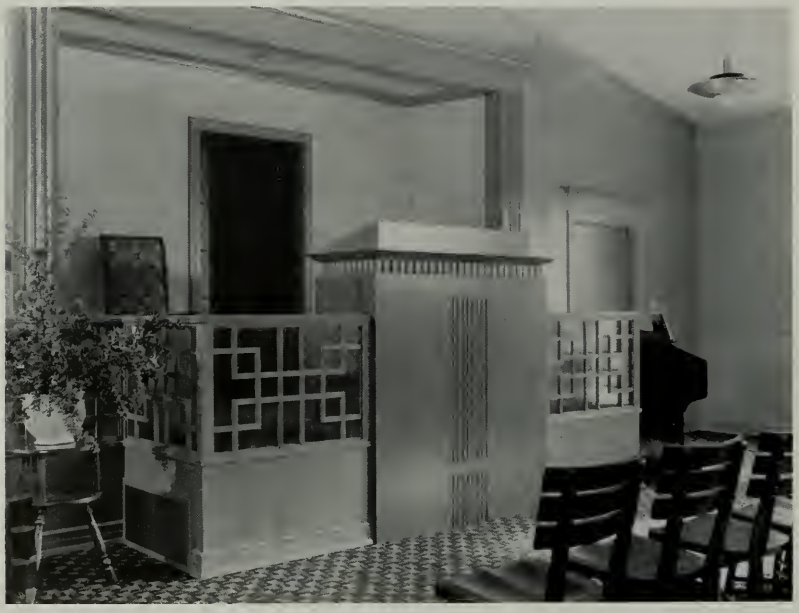
GARDEN VIEW

RESIDENCE OF DR. LYLE B. KINGERY, PORTLAND, OREGON

Tucker & Wallmann, Architects

STAIR HALL

RESIDENCE OF DR. ANDREW J. BROWNING, PORTLAND, OREGON
Glenn Stanton, Architect



Detail of
Rostrum
First Church of
Christ Scientist
Lake Grove
Oregon

Glenn Stanton
Architect

UPPER GALLERY, HIRSCH MEMORIAL WING, PORTLAND ART MUSEUM
A. E. Doyle and Associate, Architects

to the word "modern" but will accept rooms that show Le Corbusier's influence if they are dubbed "modified" or "simplified" Colonial. A Neutra house is now being built in Portland, under the supervision of one of our Chapter associates, and the drawings, as well as the structure itself, have come in for much comment and interest by the profession.

Plywood is not used as extensively here as it should be, considering that the bulk of American softwood is manufactured locally, but this is accounted for by the wide margin of difference in cost between good-quality plywood and finish lumber The use of flush-panel, hollow-core doors, however, is growing perceptibly and Portland prides itself on being the point of origin for most of the large shipments of such doors for the Eastern slum-clearance market. The use of open-web steel joists, metal windows, slate and tile roofs, stone veneers and other such details is considered a luxury because of the differential in costs due to the local competitive lumber products.

* * * * *

This is a low-priced building cost market and this, too, has an important bearing on architectural design. Architectural specifications cannot contain many luxury clauses and this

Hirsch Memorial Wing
Portland Art Museum

A. E. Doyle and
Associate, Architects

factor militates against the use of new and experimental materials unless of proven economy. It is doubtful whether in any other region in the United States the client gets any more for his construction money than in Oregon. At present, in spite of the passing of the PWA and the diversion of government funds to armament instead of construction, there is and has been, a steady growth of private expenditure, and the local architects are experiencing a period of considerable activity in residential work and smaller commercial building.

* * * * *

The accompanying illustrations are but a few of the many new buildings and alterations done in Portland and vicinity in the last two years, including the two buildings—Library and Power Plant—added to the State Capitol Group, two heretofore unpublished photos of the new Art Museum wing, two recent additions to Mr.

JOE WEINER SHOP, PORTLAND, OREGON
A. E. Doyle and Associate, Architects

Aandahl's ecclesiastical work and Jacobberger's St. Vincent Hospital East—the largest single construction project now going up in this locality.

Pictured also are several successful commercial buildings and alterations, together with an assorted group of residences. Of particular interest is the mosaic wood mural shown in the frontispiece by Mrs. Aimee Gorham,—the most recent of a large number of highly successful such decorative panels designed and executed by this artist who was made an Honorary Associate of the Oregon Chapter, A.I.A., last year.

BEFORE ALTERATIONS

ALTERATIONS TO RESIDENCE OF WAYNE W. COE, PORTLAND, OREGON

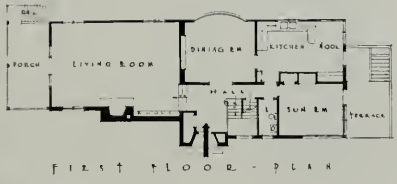
Roi L. Morin, Architect

RESIDENCE OF DR. AND MRS. A. D. WOODMANSEE, SALEM, OREGON

Cash & Wolff, Architects

ENTRANCE DETAIL

SECOND FLOOR PLAN.



FIRST FLOOR PLAN

PLANS

NEW SALEM HIGH SCHOOL, SALEM, OREGON

Knighton & Howell, Architects

DETAIL

NO SUCH THING
AS "CALIFORNIA ARCHITECTURE"

By MARK DANIELS, A.I.A.

A RECENT issue of a nationally circulated magazine, published in New York, stated that the visiting Englishman would find the American climate quite different from the English climate. It is possible that this New Yorker had in mind the climate of New York and was guilty of mistaking conditions that obtain in that great city for the norm of all things in North America. That mistake has been made before.

In much the same way, we hear the phrase, "California Architecture." There is no more a definite "California Architecture" than there is an "American Climate." We may speak of an English Architecture, Spanish, French or Swiss Architecture but neither domestic nor monumental architecture in California has arrived at a stage where we can point to a structure and say "That is California Architecture."

It also has been said that domestic architecture in California is a goulash, a mixture of types of structures ranging from the Nomad tents of Arabia to the totem poles of Alaska. In a degree, that is to be expected. Archeologists, which modernists hold includes most of the passing generation of architects, agree that the six most potent factors influencing architectural style are geographical, geological, climatic, religious, social and historical. This being true, what might one expect to find, other than a variety that runs the entire gamut of styles, in a territory that has a thousand miles of coast line running mostly north and south, a coast line that would stretch from Rome to Copenhagen, from Marseilles to Edinburgh, from Istamboul to Warsaw? How could one expect to find architectural unity in a land that spans ten degrees of latitude, in an area that embraces the highest and lowest points in the United States, in an empire registering temperatures that vary from the torrid heat of the Sahara deserts to the chill winds that sweep perpetual snows? No, there is no such thing as "California Architecture."

The fact that Cabrillo discovered the Bay of San Diego in 1542, that Sir Francis Drake named California "New England" forty years before the pilgrims landed at Plymouth Rock, is of historical interest only. Neither they nor any other exploring expedition during the next 200 years left anything to influence architecture. It was not until 1769, when Franciscan Padre Junipero Serra, a native of Majorca, founded the first of a chain of 21 missions that stretched from San Diego to Sonoma that architecture as such began to take form. From that date to the present time, those missions have exerted a powerful influence on architecture in California. During that period of 160 years, her styles have passed through four distinct periods, with one of these period styles lasting through nearly all of the 160 years. To my mind, these periods are best classified as the Spanish period, the Jig-saw period, the Bungalow period and the Modern period.

THE SPANISH PERIOD

For nearly two hundred years architecture in California has responded to the influence of early ecclesiastical buildings. In 1768 Junipero Serra built in San Diego the first of a chain of missions that ended in Sonoma. Until the mid-

dle of the last century about the only structures of any moment in the State of California were those missions. They were not of the scholarly style of the edifices of Old Spain. They had none of the Gothic spires and arches of Burgos nor the plateresque crestings of Salamanca. They were the best that the Franciscan fathers could do from memory, with native Indian labor and local raw materials. The arches of their arcades would have anguished Vignola and the sight of their crude mouldings would have been torture to Bramante. But they had an individuality and, in many instances, a charm that took so strong a hold of the builders of the state that by the year 1890 Mission architecture, as it was called, was the style of most of the better residences.

As the social influence developed, architects delved deeper into the precedents of the Mission designs and brought forth great homes and haciendas, mostly in the southern part of the state, that were based upon the fine old buildings of Spain, introducing the more scholarly detail, the larger expanse of the blank white walls, the restrained fenestration, and the rich grille work that the old masters in Spain employed in their patios and court yards. The style was a natural result of climate. It enjoyed waves of popularity that swept it to other parts of the state and country, where it was often out of place. In many parts of Southern California where the Spanish style is exquisitely adapted to a climate that permits the growth of sub-tropical palms, fruits, the red Bougainvillia and the hybiscus, it is still dominant. In 1920 there arose such a wave of demand for the finer Spanish architecture that hardly a large house in Santa Barbara, Los Angeles or San Diego was designed in any other style.

Much of the revival of Spanish architecture at this time may be attributed to the work of Bertram Grosvenor Goodhue at the San Diego Exposition in 1916. There that great artist gave the architects of California an example of what could be done with towers, domes, arches, rich moldings and wrought iron balconies, that fired a hundred draughting rooms with ambition. Within a few years, churches, stores, colleges, great residences and public buildings began to rise in the varying styles of Old Spain. One of the most consistent examples is the City Hall of Santa Barbara. Others are to be found in the numerous buildings of Morgan, Walls and Clements, mostly done with plateresque ornament, the restrained work of Myron Hunt at Occidental College, and in many famous club buildings.

THE JIG-SAW PERIOD

While it is true that the Padres had built as far north as Sonoma, the influence of their architecture decreases with the distance north of Santa Barbara. Nearly all of the timber land of the state is in the central and northern parts, and it was only natural that the people in those sections should instinctively eschew the plastered, or stucco, walls of the south and incline toward the all-wood house. In the eighties most of the houses in San Francisco were of wood throughout. With forests of redwood at their doors and pine not much farther away, the edifices of the bonanza kings went up in wood. Then came the jig-saw and the turning lathe.

With the invention of these wood-working machines came a wave of style as overwhelming as the Spanish wave in the south. Barge boards, eaves, roof ridges, balustrades, pillars and columns, window casings and boxes, balconies, were jig-sawn, turned on lathes, and festooned around houses until a wedding cake was as plain as a cake of soap in comparison. If it had not been for the earthquake and fire of 1906 there would be many more examples of this style in San Francisco. Strange as it may seem, many of these mute testimonials to a love of ornament have some of that charm that is ever found in generosity and a frank expression of taste or preference. There are numerous examples in such towns as Santa Rosa, Petaluma, San Rafael, Stockton, Auburn and Red Bluff, but, like time, architectural style marches on, and by the end of the century the bungalow period had the architects by the throat.

THE BUNGALOW PERIOD

No movement, emanating from California, ever swept the state, the country and the world at large like the California bungalow fad. Every one story small house that had a porch attached was called a bungalow. Although the name came from Bengal, where the original bungalow was a thatched cottage with a porch running around it, the California bungalow soon took on a style of its own. The major elements were low wide eaves, a flat pitch, numerous outlooker rafters, square posts supporting a flat or pitched veranda roof and wide, low windows.

The movement started in southern California where the wide, overhanging eaves and the roofed porch, often screened, provided shade and cool air. The first examples frequently were charming but with the sweep of the movement it was not long before any one story house of five or six rooms and a porch was called a bungalow.

When the Frank Lloyd Wright style, with its flat roof and two foot fire wall above a wide, flat cornice, came in, it too was swallowed, digested and came out a California bungalow. Later the bungalow was given a Spanish accent. The roofs were pitched more steeply and often tiled. The surrounding porch was shrunk to a short entrance protection. The horizontality of encircling eaves was abandoned and gable ends introduced, and the horror of the present day Spanish bungalow with a huge arched window in these gable ends lifted its ugly head. Usually they look out onto nothing but the paved street and are so large that there is hardly enough wall space on either side to provide for structural requirements. These architectural mongrels bear no relation to the original California bungalow which actually had some reason and charm. They are the hermit crab, the cuckoo in the robin's nest, of bungalow architecture, are attrociously ugly, and are still going up in thousand lots, nearly all without benefit of architect.

THE MODERN PERIOD

The only period of architectural style in California that has not been inspired by one or more of the six fundamentals is the present so-called modern. Here the architects of the state have followed a world movement and have not yet had time to adapt that style more closely to the social and climatic demands and conditions.

First to recognize the movement were architects of monumental buildings. The 32 story Russ Building in San Francisco, the tallest office building in the state, and the Shell Building, both the work of the late George W. Kelham, are modern in mass though not in detail. Timothy Pflueger's Four Fifty Sutter Building is totally modern, while his Telephone Building is partially so. Lewis Hobart's Hotel Taylor is quite modern in mass. In Los Angeles such architects as Parkinson and Parkinson, Allison and Allison and Gordon B. Kaufman have gone mildly modern in their monumental work.

Following the lead of the architects of the greater buildings, the domestic architects took a deep breath and plunged into the modern pool. Tearing a few pages out of the work of le Corbusier and other European architects, Irving Morrow, Miller and Pflueger, Gardner Dailey in San Francisco; Edgar Bissantz, Earl Webster and Adrian Wilson in Los Angeles, rushed to the vanguard. The Long Beach Polytechnic Auditorium by H. R. Davis and the Jefferson High School in Los Angeles by Morgan, Walls and Clements are as modern as anything in Germany.

Clearing for these men a path that may lead to God only knows what school of architectural design is the work of Richard J. Neutra and R. M. Schindler. The designs of these capable architects may seem too radical, but much of it testifies to a fire and enthusiasm for the adaptation of the ultra modern that may eventually lead to a California style, for Southern California at least.

IN RESUME'

The need for brevity precludes a discussion of architecture in such historic old towns as San Diego and Monterey or the college architecture at Berkeley, Los Angeles and Palo Alto,

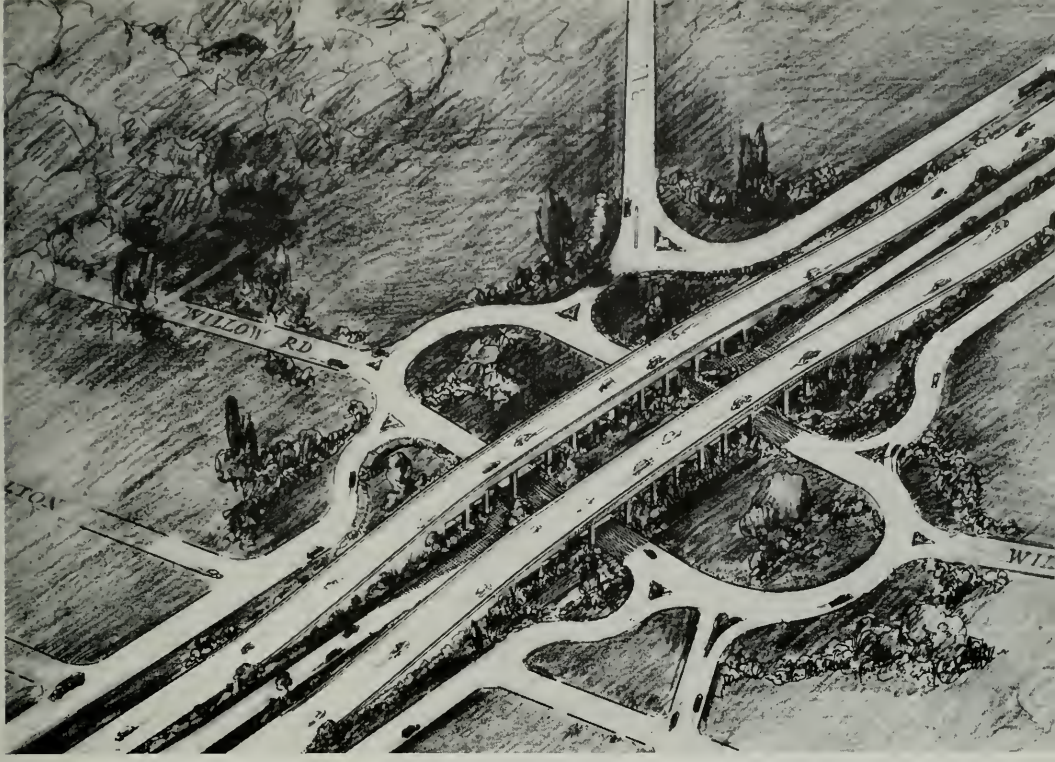
or the great public buildings of Arthur Brown, Jr., in San Francisco. I have endeavored only to disentangle the skein of architectural development in California sufficiently to present a sequential picture. No mention has been made of the log cabins in foothills and mountains nor of the colorful mining towns, some of which still are prospering.

From the very beginning to the present day the Spanish influence has been dominant from the Mexican border to San Francisco, with a decidedly greater force in the south. The period of wooden houses with ornate trimmings was short lived, but none the less definite. The California bungalow, so long as it retained its early character, had a definite place and style, but it has been bastardized by the Spanish and contractor designers. Now we are in the swing of the modern.

In monumental and ecclesiastical architecture, the situation is different. There is not sufficient variation in climate from north to south to demand a radically different style of architecture in office buildings or cathedrals. As a result this branch of architecture presents a greater uniformity throughout the state.

Due to the difference in climatic and social conditions there is, and always will be, a distinct difference between the domestic architecture of Southern and Northern California. The south is an all year, open air country and it is inevitable that architecture there will reflect that fact. Along the coast to the north this condition obtains to a considerable degree until the San Francisco Bay region is reached. From there north and in the great valleys of the Sacramento and San Joaquin, domestic architecture again changes to fit conditions of hot summers and cold winters.

With social and political conditions changing with kaleidoscopic swiftness, with a fame for climate and fertility that has rung around the world, with new conceptions of appropriate styles from all corners of the world accompanying the great influx of people, with ghost towns, dead towns, live towns, great cities where fortunes have been made over night, and with farming centers developing in an amazingly short time, it is no wonder that California should display a diversity of architecture that embraces nearly every conceivable form. You may not like, may even be deeply disturbed by this utter lack of unity, but you will not find it monotonous.



ENGINEER'S DRAWING OF PLAN FOR CARRYING BAYSHORE TRAFFIC ON TWO SEPARATE OVERPASSES AT WILLOW ROAD INTERSECTION IN PALO ALTO. OUTSIDE LANES ARE FOR LOCAL TRAFFIC AND SAFE ACCESS LANES TO FREEWAY.

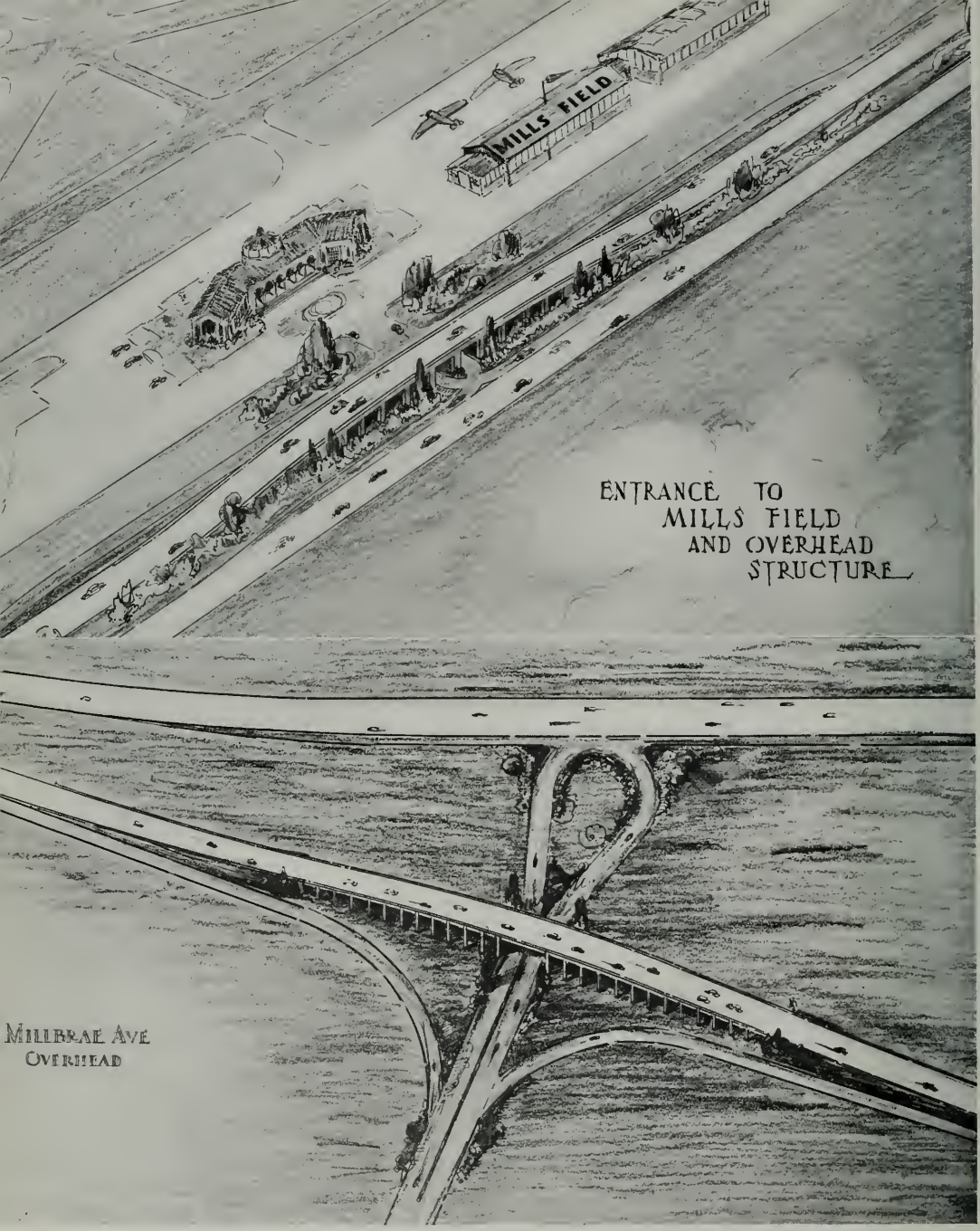
TRAFFIC CONGESTION

S. F. BAYSHORE TO BE A FREEWAY

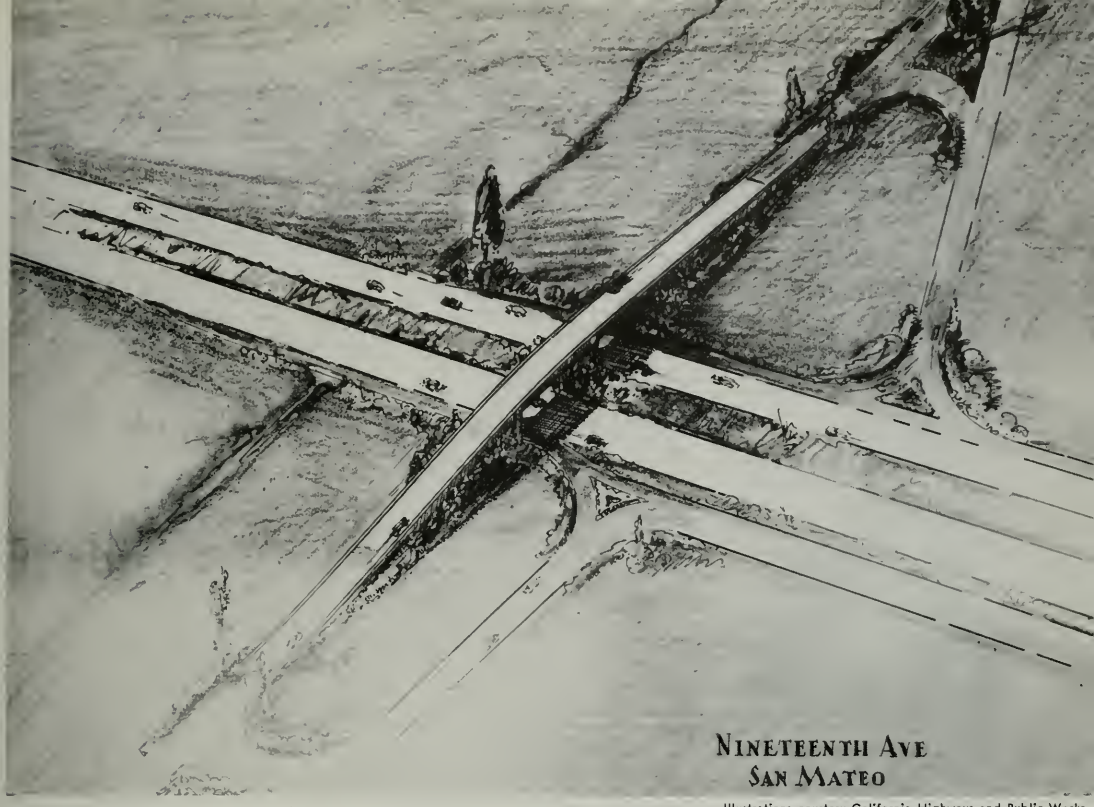
TRAFFIC conditions on the Bayshore Highway, between San Francisco and Palo Alto, have become so acute that the State Department of Public Works, through Director Frank W. Clark, has asked for a special report on conditions from C. H. Purcell and John H. Skeggs, State Highway Engineer and District Engineer, respectively. Supplementing this report, which advocates conversion of the highway into a freeway, with six lanes divided by a medium strip for high speed traffic, together with the construction of 25 overhead crossings, underpasses and major structures, Director Clark in a report on the subject says:

"In view of the increasing traffic congestion problems in our metropolitan areas, Governor Olson and the California Highway Commission are of the opinion that the logical solution of these problems in our largest cities is the construction of high-speed freeways such as the Arroyo Seco project now nearing completion between Los Angeles and Pasadena, and this proposed freeway between San Francisco and Palo Alto.

"Such undertakings involve the expenditure of large sums of highway funds, and necessarily



UPPER DRAWING SHOWS PROPOSED PLAN FOR ENTRANCE TO MILLS FIELD, SAN MATEO COUNTY, WITH ONE OVERPASS STRUCTURE IN THE SEPARATED FREEWAY LANES. BELOW, MILBRAE AVENUE INTERSECTION SHOWING EXISTING HIGHWAY SEPARATED BY 40-FOOT DIVISION STRIP.



Illustrations courtesy California Highways and Public Works.

PROPOSED OVERPASS AT NINETEENTH AVENUE, SAN MATEO, CROSSES WIDELY SEPARATED FREEWAY LANES WITH CURVED APPROACHES PROVIDING SAFE ACCESS TO HIGHWAY.

must be built in sections under a long-range program. The present State administration is committed to a policy of assisting cities to solve their traffic congestion problems, and Governor Olson is greatly interested in having the Bayshore Freeway started as soon as moneys required may be provided for in the next biennial highway budget.

"The Arroyo Seco is the first freeway undertaken by the Highway Commission, and the Bayshore Freeway will be the first project of its kind in Northern California.

"In establishing the freeway principle on the Bayshore Highway the State will be able to conserve the full original investment in this route which is susceptible of expansion with a minimum of conflict with residential and property improvements."

State Highway Engineer Purcell's report pointed out that traffic from the San Francisco-Oakland Bay Bridge, from the Golden Gate Bridge, and the East Bay District, in addition to traffic from San Francisco, now pours onto the Bayshore Highway, which is inadequate to handle the ever-increasing numbers. In less than ten years Mr. Purcell believes that both the El Camino Real and the Bayshore Highway will be carrying capacity traffic.

In his report to the Commission, Director Clark submitted tentative plans and drawings for the contemplated freeway, extending from the vicinity of Third Street in San Francisco to the Embarcadero Road-Oregon Avenue intersection in East Palo Alto, a distance of some 27 miles. The first unit of the project will be from the South San Francisco underpass to and including Broadway in Burlingame, at an approximate cost of $2,300,000.

HOUSE FOR MRS. MARY LEA SHANE, BERKELEY, CALIFORNIA

Gwynn Officer, Architect.

SOUND IN PERSPECTIVE

A THREE DIMENSIONAL ILLUSION

By GEORGE DOUGLAS MACARTHUR

THE word "Stereophonic" is a combined form of the Greek "Stereo" meaning perspective, solid or having body, and "Phono" meaning voice. This literally describes sound in perspective or three dimensional illusion, heretofore not thought practical in the reinforcement of the human voice or a number of sound sources from a stage.

Stereophonic sound, although theoretically possible for many years and even attained in laboratory tests at the Bell Telephone Laboratories, was not displayed until 1933 at a private demonstration by Dr. Harvy Fletcher of the Laboratories, whose work in reproduced sound included the third dimensional effect.

To make a most extraordinarily effective demonstration, Dr. Fletcher made a so-called three channel interconnection, which will be explained later, between two theatres, one of which was located in Philadelphia and the other in Washington, D.C. On the stage at Philadelphia, a carpenter hammered and sawed, and at the same time carried on a conversation with a man on the opposite side of the stage. A

Editor's Note: The author is consulting engineer for the Lansing Mfg. Co and the Breck Photoplay Supply Co. of Los Angeles.

IN THIS AUDITORIUM AT WHITTIER HIGH SCHOOL, WM. H. HARRISON, ARCHITECT INTRODUCED THE FIRST INDOOR STEREOPHONIC SPEECH EQUIPMENT IN THE WEST.

soloist sang as she walked across the stage, and other demonstrations of change of location were made over the wires to Washington. This sound was amplified and transmitted to a horn system behind a curtain on the theatre stage. It was only when the curtain before the horns was lifted that the Washington audience could believe what they had heard had not taken place on the stage before them.

Dr. Leopold Stokowski made several demonstrations, the most outstanding of which, in my estimation, was in Hollywood Bowl in 1935. Every note of this full symphony orchestra was reinforced, and filled the huge outdoor amphitheatre with every instrument, or vocalist in true perspective, as to position and volume level. Perhaps this was the greatest demonstration of electrically reproduced sound of high quality ever made. The acclamation of the 25,000 people who witnessed this event showed the necessity and practicability of stereophonic sound in places where large public gatherings took place.

Wm. H. Harrison, A.I.A., made the first permanent indoor installation at the Union High School Auditorium in Whittier, illustrated in this magazine in September, using equipment furnished by the Lansing Mfg. Company, a Western Electric licensee.

This system has three individual input channels. However, each channel has dual inputs, hence six microphones can be used simultaneously on the stage, giving full range pickup and placement of microphones. This arrangement assures the full coverage in perspective of the entire stage. Hence a speaker or singer can move about with freedom and only about 3 DB volume difference even if the mixer pots are left normal. About 12 DB reinforcement is felt at 12 feet from the individual microphones (W.E. 639 A with suitable equalization provided.)

The mixer was designed for portability, hence is very small compared to what the design for permanence would call for. However, note that the mixer proper is only $5\frac{1}{2}$ inches deep by 8x18, and contains the following services:

Six microphone inputs (high level); wire wound bridge "T" potentiometers; phonograph and radio inputs; high pass and low pass filters with an electronic organ control bridging both output channels.

Frequency response for all three channels from 20 cycles per second to 20,000 Cps-3 db and flat from 40 to 12,000 Cps. This more than fulfills the greatest input expectations for a number of years, especially at distortions of less than 1% over the entire spectrum.

The mixer output consists of two channels taking the combined input and electrically segregating the incoming sound to the desired levels feeding two main amplifier channels. These in turn feed two Binaural horn systems located in grilles over the proscenium arch shown in the view of the auditorium accompanying the article.

The effect noted is that a person standing between any two microphones and talking, the sound will take up the space difference heard by the human ears, in noting if the eyes are closed, a certain perspective of sound. This space difference is in effect the absolute noise level of the intervening space—say stage noise (feet movement, breathing, wind, set reflections). In effect, the audience hears this but is not conscious of it as noise. However, it does place the performer with respect to the set whether it be outdoors or in.

At the Whittier Auditorium, the results attained have been more than gratifying as attested by many sound engineers connected with the motion picture studios in Hollywood, whose proximity enables them to check its performance for their work in developing three-dimensional motion pictures.

The architect will find that the reputable sound reproducing companies will supply any information or data upon request—systems, layout, conduit and wiring diagrams and horn placement suggestions.

PENTHOUSE THEATER, UNIVERSITY OF WASHINGTON, SEATTLE
Charles C. May, C. Ken Weidner and S. Serger, Designers
Bebb and Gould, Consulting Architects

UNIQUE ROOF DESIGN

GLUED LAMINATED TIMBER ARCHES

By FREDERICK JONES

GLUED laminated wooden arches for roof support in buildings desiring a large free floorspace has been the subject of considerable research on the part of construction engineers, architects and lumber concerns during the past few years.

According to the evidence as represented by this research, this unique type of construction makes possible wider uses for lumber and new innovations in design without over-complicating building methods.

One of the most recent examples of the use of glued laminated trusses is the new drama building constructed as a Work Projects Administration project for the University of Washington at Seattle. From a construction standpoint this job is unique in that the glued laminated arches were fabricated on the site. In addition to the use of such supports, interesting architectural features include the building's novel elliptical design which places the stage at the center of the auditorium in Greek theater manner.

Known as the Penthouse Theater, the building is one-story, 82 by 112 feet in dimension, and contains 7,451 square feet of floor area with a seating capacity of 200. The elliptical design was evolved in order to secure the utmost efficiency in acoustics and in order to place the stage at the center so that superfluous stage settings could be eliminated. The building was completed this summer.

Eight laminated wooden arches are used to support the auditorium room. These arches or trusses extend vertically for about 20 feet, for the sidewall, and continue on a rather sharp angle to the roof, meeting in a "hub" at the roof peak. Other than for the use of these glued laminated roof supports, methods of construction do not differ from that of standard buildings. It is the use of this type of truss, however, and the method used to fabricate

them on the job which has attracted the interest of engineers and architects.

LAMINATED METHOD EXPLAINED

For those not familiar with the process, laminated glued construction implies building up timber sections to a desired form by gluing together thin boards with water or moisture-proof glue. There are two ways to do this: one being to build up the width of the member and the other the depth. In the University of Washington theater the method of building up the depth was used.

The procedure as used by the workers on this job was essentially as follows:

(a) A template for the members was laid out and because of the repetition as well as the necessity for bending the boards to a desired curvature, a gluing bench was made.

(b) On the template the boards were laid out to scale and end cuts determined.

(c) Joints in all the boards were marked according to specifications.

(d) Boards were then scarfed, glued, cut to required lengths and numbered according to sequence.

(e) On the first arch, the boards were clamped together dry to study the procedure and make changes or improvements deemed necessary.

(f) When all was ready, the boards were run through a gluing machine, especially developed for the project, bent to the desired shape on the bench and clamped.

(g) After 48 hours the arch segments were removed and finished to specified depths.

(h) Finally, two cover boards were glued on the sides where the boards feathered out.

Sponsor for the Penthouse Theater building was the University of Washington. Messrs. Charles C. May, C. Ken Weidner and S. Sergev, all of the University, were responsible for the design. Bebb and Gould were the consulting architects. Professor Sergev designed the laminated trusses to meet the specific needs of the building, having had considerable experience in this type of construction.

According to a recent study made of the use of such members by the U. S. Forest Service, definite information on the first uses of glue in structural members in the United States is lacking, but apparently no extensive development occurred prior to the installation of glued arches in the service building of the Forest Products Laboratory in 1935. (Illustrated in Architect and Engineer, September, 1938.) Since that time approximately a hundred buildings have been erected with glued laminated arches and other members. These have been scattered in various states throughout the nation.

The countries of Germany, Sweden, Switzerland and others have used this construction in airplane hangars, auditoriums, factories, churches and gymnasiums for some time with considerable success. It was this favorable record of construction which led to experiments in America.

For a while its development in this country was slowed due to the lack of suitable glues. This has now been overcome and, according to the Forest Service, "efficient laminated wooden arch ribs and other members are today available through the use of glues of proven durability to bond laminae together as a unit so that resistance to sliding or shear is as great between the layers as within the wood itself."

The adaptability, flexibility and economy of glued laminated structures are some of the chief advantages claimed for this type of construction. In a recent report relative to this and to the use of such structures in the University of Washington's new theater, Mr. S. Sergev, of the University of Washington, said:

"The laminated glued construction is a natural solution to the elimination of unsightly, expensive, and unreliable structural details. The early aeroplane industry has contributed much to this type of construction, but by far the most important factor has been the superior quality and dependability of the glues now manufactured. It is, of course, evident that the glue plays an important part in this type of construction.

HAS VARIED POSSIBILITIES

"The application of laminated glued construction is varied. It can be used for light ornamental treatments as well as for structural members carrying heavy loads. Stairways with graceful curved lines can be easily formed by

bending the material to desired shape, glued, and clamped in position for a specified number of hours. Structural shapes such as arches with variable cross-section, roof beams with camber on the bottom and slope for drainage on top, ribs for dome construction, and many other unusual shapes are easily made up by this process."

The arches for the Penthouse Theater are constructed of multiple laminations of 9/16" by 5⅝" by 20-foot stock. Kiln-dried, clear, old-growth Douglas fir was used. As 20-foot lengths were the longest economically practicable lengths available, it was necessary in the first operation to join the ends by beveling a distance of 7 inches on either end and gluing together to form one continuous piece averaging in excess of 40-feet in length.

Specifications for the arches limited the placing of the joints. No joint was allowed within 2 feet of the spring line of the curve of the arch and no joint in the curve operation of arch at all. In addition, the joints were made to occur at intervals of not less than 2 feet with a minimum of three boards between each joint in the same plane. This necessitated working out a proper sequence of the boards so that, after they were glued, further sorting would not be necessary.

In order to facilitate equal gluing, speed of the operation and handling, a practical glue machine was designed on the job. In as much as this was a government project, this machine, of course, is not patentable, but remains government property.

A casein glue was used, the dry glue powder being mixed with water at a temperature of roughly 70 degrees F. Extremely cold water was avoided in mixing, as this tends to retard the chemical action and make the glue lumpy. A minimum of thirty minutes mixing time was found necessary.

From 28 to 32 men were used in assembling each arch or truss. Two men were used to feed the boards into the machine and three to receive them on the bending table in the clamps. On the bench there are clamps every 2 feet and one man was required at each set of clamps.

PLACING LAMINATED WOOD ARCH RIBS, PENTHOUSE THEATER, UNIVERSITY OF WASHINGTON, SEATTLE.

VIEW SHOWS COMPLETION OF FRAMEWORK OF PENTHOUSE THEATER. PICTURE BELOW SHOWS THEATER LOBBY.

Approximately eight minutes were required to glue all of the boards necessary for one arch. Having been glued and placed in the clamps, the clamps were tightened at one end of the assembly with a pressure up to 75 pounds per square inch. The entire group of boards were then forced, dry and not heated in any way, about the arch and clamped on the other end. As the clamps were tightened on the arch, all excess glue was squeezed out and wiped off.

The glued boards were left in the clamps for a minimum period of 24 hours after which the clamps on the curved section were released sufficiently to allow a proper number of short boards to form the heel of the arch. The clamps were then retightened and the entire truss allowed to set for a minimum of 24 hours longer. The entire arch was then removed from the clamps and trimmed to exact size and two additional boards glued on the outer edges, and the entire member treated with a waterproofing compound to make it impervious to the weather.

Among the advantages and possibilities cited for this type of construction by the U. S. Forest Service research are the following:

"Arches to span large unobstructed areas with superior architectural effect are made available.

"Material of the sizes used in laminated construction can be dried in a short time. Hence thoroughly seasoned members that will be subject to only a minimum of warping, twisting, and shrinkage after installation can be provided quickly.

"Members can be built up to large cross section and greater length than are otherwise readily available or than can be shipped conveniently over long distances.

"The applicability of wood as a construction material is extended by providing new types of wooden members with possibilities of economy through the use of at least some low-grade, narrow-width, and short length material.

"Laminations can be positioned in accordance with their strength characteristics as determined by species, density, and defects."

COPPER FOR TERMITE SHIELDS

Word has recently come from FHA headquarters in Washington that 3-ounce Copper-Armored Sisalkraft is now approved for use over the top surface of foundation walls where there is full excavation.

This material consists of a thin electro-deposit copper sheet weighing 3 ounces to the square foot. To give it the necessary strength for effective application, it is reinforced by crossed sisal fibre, bonded with special asphalt between the copper sheet and a kraft paper backing.

According to FHA engineers, this reinforced copper sheet provides approved termite protection when laid over the top of the foundation wall on any building that is fully excavated, or any portion of a building that is excavated. It is not necessary to provide a projecting lip of copper beyond the foundation when full excavation occurs.

Copper-Armored Sisalkraft has been widely recommended as an effective and economical damp-coursing between foundation and sills, since it provides a permanent and impervious moisture barrier at considerably less cost than sheet metal.

CALIFORNIA'S 6-YEAR BUILDING RECORD

Federal, State and industrial sources show that in the last six years the astonishing total of two billion dollars—an average of $300 for every person in the State of California—has been invested in the construction of bridges, highways, hydro-electric systems, irrigation and defense projects, civic and commercial buildings, factories and thousands of homes throughout the State. From the construction industries more than one million Californians directly secure their livelihood.

This California record is all the more striking when it is realized that from the national viewpoint, building construction has lagged behind other industries in recovering from the depression years. The achievements of the California construction industries would seem to give definite confirmation of the Westward trend of industry which has marked many recent developments in the national economy.

BETTER HOMES

More than 44,000 low-income families, removed from blighted residential areas in about 150 cities and towns, will be occupying new and decent homes in USHA-aided low-rent public housing projects by December 31, according to a check-up just made by the United States Housing Authority.

All of these families, it also is announced, will be paying rentals approximately the same, or even lower, than are demanded for substandard dwellings in their localities.

In addition, 1,174 USHA-aided low-rent homes for families of enlisted Army and Navy personnel and civilian national defense workers are scheduled to be completed by the end of December.

ARCHITECTS' BULLETIN

Issued For

THE STATE ASSOCIATION OF CALIFORNIA ARCHITECTS

Northern Section

STATE ASSOCIATION MEMBER
OF THE
AMERICAN INSTITUTE OF ARCHITECTS

Editor
Harris C. Allen

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Convention

REPORTS of the actions and activities of the 1940 Convention will appear in the November Bulletin. But it is safe to report it as of interest and importance to the profession in California, and of enjoyment to those attending—including, of course, those better halves, the prides and guides of our otherwise somewhat drab existence. To the Ladies—those for whom we design, and those who have designs on us!

ON THE AIR

The broadcasting program of the Association ended, temporarily, we hope, on Sunday, September 15th. Until sufficient funds accumulate to warrant further programs it is inadvisable to incur the expense.

This does not mean that the campaign for subscriptions is to stop. On the contrary, it gives more time to present the situation to all our members. The Advisory Council has been "drafted" to secure as many as possible subscriptions at three dollars a month, for a three months period—or larger amounts if any members feel so inclined. If about two-fifths of our membership subscribe, the cost of the program will be met.

So far as we know, there has been no opposition to broadcasting, although various criticisms of the programs themselves have been received. This is as it should be. All constructive criticisms are welcome and are used in modifying future scripts. Surely it must be clear to everyone that impersonal, more or less technical statements are wasted on the air, no matter how educational they may be. A medium has to be found between this "high" level and a "low" level of blatantly commercial, trashy, mass appeal. It would never be possible to please all of us. Probably our older architects would prefer a "dignified" presentation of purely professional nature; and the younger ones, something smart and novel enough to attract attention, to be generally interesting if not exciting.

In any case, the indirect effects are bound to be more helpful than any direct leads; for the objective is to produce as many as possible future clients who will have a better understanding of what architectural service is, and what good building construction is—of how best to protect their considerable investments in real property.

Later broadcasts are intended to go into matters of design, construction and materials; and to take up commercial as well as residential problems.

A SOUTHERN BROADCAST

Since the Southern Section is much further along in their series of programs, a digest of one recent, very practical and specific one follows:

(Turn to Page 56)

GENERAL VIEW OF MAIN POOL WITH SCALE MODELS IN BACKGROUND
VENTURA BOULEVARD, LOS ANGELES

SWIMMING POOLS — A SOUTHERN CALIFORNIA EXHIBIT

THE construction of swimming pools in private estates is becoming increasingly popular and architects are constantly seeking new ideas and suggestions. In Southern California alone over two hundred new pools have been completed in the past six months, proof that both architects and owners are becoming more and more swimming pool minded. Admitting the tempered climate in the Los Angeles area has something to do with the popularity of out-door swimming pools, there are other contributing factors which must not be overlooked. One is the low cost of building these pools and another is a new method of displaying pool installations to architects and owners.

Pools are now displayed with the same appeal to the prospective owner as automobiles are exhibited in a show room or merchandise in a department store. In a half acre of ground at the intersection of Ventura and Sepulveda Boulevards in Los Angeles, the Paddock Engineering Company has constructed, so far as known, the only permanent swimming pool exhibit in the world. Included in the unique display are many scale models (two inches to the foot) of both private and public swimming pools in various shapes, finishes and types of construction. For example, there is a miniature mountain lake surrounded by an evergreen forest; near it is a swanky all-tile pool complete with miniature chromium plated ladder, diving board and submarine light. Even the cast stone coping and walks are carried out to scale. Then there is a replica of Paddock's famous "Blu-Opal" pool which was opened to the public and seen by over 20,000 people on Sunset Boulevard in West Los Angeles earlier this year.

Other miniatures include a plain rectangular and strictly utilitarian pool of the type much favored by municipalities and institutions, and a very formal and elaborate pool finished in white marble, designed for a formal garden. An outstanding exhibit is a full size 20x40 residential pool designed like an inverted dome, blu-turquoise in color, with diving board, ladder, submarine light, tile trim, cast stone coping, brick walks, shallow end steps and complete filtration plant. The estimated cost of this colorful pool and equipment is from $2,000 to $2,400.

Since this exhibit was conceived primarily with the idea of providing a place where architects might bring their clients to show them a selection not only of pool designs but of pool finishes, materials and equipment, the layout embraces a complete display of these items.

One terrace is devoted to concrete flat work suitable for walks and terraces in a variety of colors and textures. Another area is devoted to samples of chemical staining, and another to integral color, while a variety of textures and patterns are used throughout. There are extensive exhibits of both stone and brick

RIGHT—CLOSEUP OF MAIN POOL WITH SCALE MODELS IN BACKGROUND.

CENTER—MINIATURE FORMAL POOL.

BELOW—SCALE MODEL POOLS IN DIFFERENT STYLES FOR VARIED SETTINGS AND PURPOSES.

walks and walls. Many colors and styles of stone and slate flagging are shown, and cast stone walks and copings are displayed in various colors and textures. In addition to the tile trim shown on the various pools, there are several typical tile gutter treatments in detail.

One section of the exhibit is devoted to pool accessories, such as ladders, springboards, submarine lights, slides, life lines, ropes, anchors, floats, sun mats, umbrellas, tables, chairs and other articles of pool furniture. There is also an exhibit of pool cleaning equipment, featuring new types of two and three wheeled vacuum cleaners, friction cleaners and skimmers. Two types of gas chlorinators are on display, as well as hydro-chlorinators and a complete exhibit of sterilizing agents and other chemicals.

Charts have been prepared tabulating all the information regarding pools which is of interest to architects and engineers, so that it is readily acceptable in the most usable form. This includes diagrams of all types of Paddock filter installations from those designed to take care of the smallest residential installation up to elaborate and complete installations for the largest public pools.

The entire exhibit was laid out and landscaped by Tommy Tomson, landscape architect, whose work is familiar to California architects. The office was designed as a small bathing pavilion with shower and dressing room facilities which are used in connection with diving exhibitions and bathing beauty contests.

In addition to the various pools shown at the exhibit, some forty-eight Kodachrome slides of recent Paddock installations are shown on a glass screen visible from the boulevard every evening from dusk until midnight. The exhibit, open daily from 10:00 a.m. to 10:00 p.m., has been visited by over 10,000 persons since it opened in May.

As a service to architects and owners it has proved a pronounced success. A novelty at the outset, the people of Southern California have adopted the Paddock exhibit as an institution, coming from all parts of the state as a matter of course before deciding on the size, shape and type of their projected pools, be they public or private.

ARCHITECTS' BULLETIN

(Continued from Page 53)

"50 QUESTIONS TO CONSIDER IN PLANNING A HOUSE"

"Economical Home Planning does not mean cheapening all the materials to such an extent that the shabbiness shows through—

"It doesn't mean omitting essentials—essentials for comfortable every-day living—

"It doesn't mean 'chiselling' down the price of the sub-contractors so they cannot perform a good workmanlike job—

"It means an intelligent planning and arrangement of rooms—

"It means the eliminating of non-essentials—such as waste hall space, etc.

"It means the intelligent use of materials—

"It means getting dollar for dollar value in your home—

"From the above it will be noted that it requires training, experience and a thorough knowledge of not only costs, but economical use of materials and skill in planning. Following this further, it leads us to the one man who can properly handle your problems—the one man, the **only** man, engaged in the work of designing your home and constructing it—the **only** man who is definitely, completely and thoroughly educated and trained for this work—the architect.

CONSULT AN ARCHITECT FIRST

The State Association of California Architects, Southern Section, presents the following fifty questions to consider in planning your home:

1. How much money should you invest in your home in proportion to the value of your lot?

2. How much money does your income at present and possible income in the future permit you reasonably to invest in your home?

3. Does the amount you contemplate investing in your home, compare favorably with the homes in the neighborhood? Higher? Lower? Or approximately the same? (Should be approximately the same.)

4. Considering the above questions, would your proposed home make a reasonably good risk for a loan?

5. What type of architecture would be harmonious to the location?

6. What material should be used for the exterior walls? (Frame and stucco, siding, brick, etc.)

7. What material should be used for the roofing? (Shingles, wood or composition, tile, slate, etc.)

8. Type of windows? (Steel or wood, casements, double hung, etc.)

9. How large should the living room be to properly accommodate your requirements?

10. Fireplaces, if one, how placed?

11. Can furniture be arranged in all rooms? (Bedrooms should have at least two walls for placing of beds.)

12. Do you require book shelves for a considerable number of books?

13. Have you provided a coat closet in the hall, vestibule or in the living room conveniently near the entrance door?

14. Does the plan eliminate unnecessary hall space or are there long halls?

15. Does the plan provide for ample large closets in all bedrooms? (Preferably 2 in each with one extra storage closet for suit cases, etc.)

16. Does plan provide easy access to all rooms, without long ways around?

17. Are bedrooms on the sunny side? (Should be.)

18. Are kitchen and service porch on shady side of house?

19. Does plan take advantage of a view, if lot is of that type?

20. Does plan take advantage of prevailing winds or protect against them?

21. Are hallways wide enough to permit moving in or out of furniture?

22. Is bedroom closet large enough to store the vacuum cleaner, carpet sweeper, etc.?

23. Does service porch allow space for washing machine and ironing board?

24. If plan provides for patio or play yard, is it advantageously placed in order to get full benefit of the sun, shade and protection from winds?

25. Is a dining room required or is a dining nook sufficiently large for your purpose?

26. Does the kitchen provide ample cabinet space for dishes? pots and pans? towel racks? tin lined drawers for flour, etc.? cutlery storage? bread and meat boards? Is it to have tile, stainless steel or linoleum drain and splash? Mirror cabinet? Electric or gas range or refrigeration? What size? Electric ventilating fan?

27. Is work space in kitchen ample and convenient? Too large? or too small?

28. Has provision been made for installation of Venetian blinds? Valances? Curtain or drapery rods?

29. Will bathroom have shower over tub or separate shower stall? Shower door? Plain or etched design?

30. Will bath have tile or linoleum floor? Tile wainscot cove base or sanitary cove base? Vitrolite or carrara walls?

31. Will fixtures be of a matched design? Chrome fittings? Ample towel bars, soap dishes, etc.?

32. Will bath room have electric bath room heater? Towel and soiled linen cabinet? Metal or wood medicine cabinet? Good brass fittings? Non-slip shower floor? Waterproof shower pan? Sanitas walls painted?

33. Is plumbing to be properly vented, trapped, with clean-outs, and air cushions at each tap?

34. Is sprinkler system line taken from main supply line before it enters house, and has or will Dayton coupling be placed between this connection and the house? Are all sprinkler system pipes outside of the building?

35. What kind of sink in kitchen and resisting special strainer? What kind and capacity of water heater? (Be sure it is big enough.)

36. What kind of heating system, gas or hot air? Wall heaters or dual furnaces? Where are registers placed? (Should be so placed as to not interfere with furniture locations, doors, etc.) What kind of control, air conditioned or forced air?

37. Do the plans provide for gutters and downspouts?

38. If a basement is provided is it above water level or is there a possibility of seepage? Does it require a drain or sand box? How accessible?

39. Is it necessary to insulate against extreme heat or cold?

40. Is the garage to be attached to the house or is it separate? For how many cars? Storage space available?

41. Electric convenience outlets; are they so spaced as to take care of floor lamps or any electric equipment without crossing wires under rugs and across doors, etc.? Radio outlet and aerial connection? Telephone conduits and outlets?

42. Large enough electric service to cover all requirements? (Heaters, etc.)

43. Have grades, landscaping, trees been carefully considered in planning?

44. Is lavatory or one-half bath necessary at service porch?

45. Are window seats, buffet and breakfast nook seats to be built in?

46. Are there ample windows and have they been interestingly arranged?

47. Do main rooms have natural cross ventilation?

48. Are screens to be of galvanized iron or bronze? Fourteen or 16 mesh?

49. Does plan provide for future addition of rooms without injuring the general appearance or convenience of layout?

50. Will completed plan afford convenient, comfortable living for your entire family and take care of all your requirements present and future?

As will be noted, there are many questions which require an expert's attention. Be safe! Consult an architect.

BUILDING IN WAR TIME

THE Department of Scientific and Industrial Research, England, has issued the first of a series of war-time bulletins which will deal with current building problems and describe work carried out under the guidance of a committee of the Building Research Board formed at the instance of the Works and Buildings Priority Sub-Committee of the Ministerial Committee on Priority.

Owing to the great demands on the steel industry for munitions of war of every kind, it is of paramount importance that steel should be conserved to the utmost and the present bulletin shows how considerable economies of steel may be effected in the factory part of the Government building program. The work has been in a very full sense a co-operative effort on the part of industry, leading engineers, Government Departments and the Building Research Station. The Design Committee of the British Steelwork Association brought together a large number of type designs and the less economical were rejected. Those which have been adopted and included in the present bulletin have been closely studied with the object of obtaining every economy in weight of steel, consistent with safety in use.

The designs included cover a range of bay dimensions from 27 x 30 ft. up to 40 x 110 ft. and two main types are given, the one for a concrete roof slab affording protection against the small incendiary bomb and anti-aircraft fragments, the other for a light roof covering suitable for factories where these agencies would not be seriously destructive. All designs have been worked for two ranges of height. The main object of preparing the designs was to provide a yardstick against which any proposals for the use of structural steelwork could be compared since, so far as is known, there is no generally recognized economic standard for such buildings. The designs have been fully detailed, but it would be incorrect to assume that buildings in which they are incorporated should be put in hand without competent engineering supervision, since modifications may be desirable to fit the designs for particular purposes and, in any case, their assembly into a complete building requires full appreciation of the basis of their method of design which is stated.

A.R.P. considerations are of the utmost importance in war-time building, since all factories erected at the present time will be engaged in the manufacture of products vital to the prosecution of the war. There are two main factors here to be considered:—Firstly, to minimize the damage likely to be caused by a direct hit, and secondly, to find a satisfactory solution of the problem of daylight illumination and of black-out, together with means for minimizing the damage likely to be caused to glazing from the blast of a bomb exploding in the vicinity. These problems have been investigated at the Building Research Station in collaboration with the A.R.P. Department, Ministry of Home Security, and it was found necessary to develop a rapid method of computation of daylighting efficiency, so that glazing can be reduced to a manageable quantity considered in terms of A.R.P. requirements, whilst still admitting sufficient daylight to enable the output to be maintained in the factory. This method of computation of daylight is given as an Appendix.

In certain cases there is a possible saving of steel by the substitution of reinforced concrete or reinforced brickwork for steel stanchions. Recommendations for the design of reinforced brickwork columns suitable for use in these designs are given. The design of precast reinforced concrete columns presents no special difficulty, and it is assumed that where convenient these would be regarded as a suitable alternative.

In view of the need for maximum economy in the use of steel in war-time construction, the potential savings in steel to be realized by reinforced concrete construction are reviewed in War Time Building Bulletin No. 2 (H. M. Stationery Office, price 6d.), which has just been issued by the Building Research Station of the Department of Scientific and Industrial Research. Using the single story flat-roofed designs given in Bulletin No. 1 as a basis, data are given showing that only a half or a third of the weight of steel may be necessary if reinforced concrete is used in place of structural steel. A diagram shows the relation between the weight of steel per 100 sq. ft. and the spacing of the vertical supports for various types of construction. For reinforced concrete, spans of from 20-30 feet are found to be most desirable.

There is a shortage of material for shuttering but considerable stocks are in existence, and some suggestions are made for utilizing this supply to the best advantage. Unnecessary architectural features, such as recessed panels, plinths, etc., should be eliminated or reduced, and formwork should be stripped at the earliest moment consistent with safety. A table of suggested times is given, but the Bulletin stresses that with reinforced concrete construction it is essential that buildings should be erected only under expert supervision by firms specializing in this type of work.

A portion of the artist personnel at Walt Disney studios entering the Animation Building, the largest unit of this completely air-conditioned new studio.

DISNEY PRODUCTIONS OCCUPY NEW HOME

WALT Disney Productions is now occupying its spacious new plant at Burbank. The property covers 51 acres, 23 of which are under roof. Natural gas is used throughout for air conditioning, hot water and steam, and in the restaurant.

A few of the outstanding features of the Disney plant include the most extensive fresh air conditioning system in the West, furniture designed and built especially for the Disney needs, one of the most attractive studio restaurants in the film capital, service station and garage for employees, and penthouse gymnasium and lounge for the artists.

The central heating plant consists of two 190 h.p. boilers equipped with gas burners. It serves the air conditioning units, automatically controlled in 158 zones. The exacting requirements of all the work here call for constancy of temperature and humidity. From the central plant hot water and steam are piped to the animation building (3 floors, 143,000 sq. ft.) to the cutting, camera, inkers' and painters' buildings and to the paint and processing laboratories.

In addition to the central plant there are individual air conditioning and heating units in the orchestra stage, theater, dialogue stage, live action stage and restaurant. This makes it possible to operate in any one of these locations independently when the central plant is not in operation, as at night or on Sundays and holidays.

Several full-length productions, involving new types of colorful and exciting animation, are now in production at the new plant, which houses approximately 1,000 studio employees.

RUNNING FIRE

(Continued from Page 1)

I looked at him and saw that he had my Old Fashioned in his hand. He apologized, profusely, explaining that he must have picked up the wrong glass because his couldn't have become empty so soon. "The mind is eventuality," he continued rapidly. "It is all that is and isn't. Because we are weak it degenerates us, but in the end our Bacchanalian philosophies will be a stepping stone to . . . " I looked around but the Little Man was gone, and I wondered casually what he had done with my glass.

ARCHITECTURE AND BUILDING PRACTICE IN CHINA

By "KALLEE-DIJON" in The Ohio Architect

WHEN an American sets up an office in China, he must get a "Hong name"—that is, he must go to an educated Chinaman and be given a distinctive name, which naturally must have a meaning.

The same is true with a Chinaman who desires to set up an establishment to cater to the American. He must get an official name from the Chinese, but the trouble is here that he generally goes to the American sailors for the Hong name, and I will quote you the American Hong names which I have seen in beautiful raised metal letters, such as:

1. John Yellow Belly, Shoe Maker.

2. Barnical Bill, Sail Maker.

3. Who-Flung-Dung-Kee, Contractor.

The word "Kee" means contractor, a typical name being Sin-Jin-Kee, Contractor.

The architectural office consists of:

1. A compradore, who is your Chinese manager, working on a percent of your business. He makes the contacts with Chinese owners, and he has four or five assistants who bring business in to the foreign master. He must entertain a great deal in night life and the usual tea parties and "talkie talks."

2. The next in order is the Schroff, who by nature is a natural bookkeeper and money changer. He is the fox. He extracts "squeeze money" from the contractors for the privilege of talking to the head master, the Architect. This money is distributed pro rata through the office and down to the draftsmen.

Confucius teachings have made him adept in remembering names and accounts, to memorize anything. He does not have to look up in account books for the costs of work done years previous.

3. The next are your stenographers, who become quite good considering that they have to write in a foreign language. American women stenographers do not fare so well, as men do the work of women, and, after all, if a girl is born in China, it is not considered good luck.

Your draughting room becomes a school of architecture. Wealthy fathers ask you to place their sons in your office, all working for food and travel money. Under foreign head-draughtsmen they learn very fast, become very efficient in mathematics, engineering, concrete design, and their draughting is superb in minute details, but naturally they misspell some funny names on your plans if not well supervised.

In other words, the American architect is known to have a creative mind, whereas the Chinese and Japanese are good at copy work.

You can talk about the "Fifth column" in the United States, but just employ German, Russian, Italian, Czecho-Slovakian draughtsmen, as we did in our offices, and you will soon discover what intrigue really means and how it works under cover.

American-born nationals have never been brought up from the cradle to intrigue, and are not looking for it from other nationals under cover.

Procedure in architectural business:

1. Often a paid competition between American, British, French and Spanish architects.

2. Plans and specifications in the usual way, but never any stock details.

3. Full size details are laid out full size without breaks.

4. Contract figures taken and lowest man gets the job.

5. Construction bonds are not heard of. The contractor's word is his bond, and it is as good as gold. He never fails.

6. Changes in plans and materials, to a certain degree, does not entail extras.

7. Constant supervision is necessary, usually by a qualified American builder, but no foreign contractor can succeed in the Orient. The labor system will ruin him. Concrete hoists are not allowed. It goes from the mixer in a human conveyor of women, in bamboo baskets, to the top of building.

Contractor's procedure:

1. The contractor first builds extensive bamboo sheds, sets up carpenter benches, lays planks between bamboo trusses for sleeping quarters. An ordinary $15,000 residence would probably have 100 skilled mechanics and apprentices. The apprentice is his son or nephew who learns the trade from the bottom up. He first makes hand tools for the father.

A cook contracts to feed them for $2 per month.

They work ten hours per day for 40 cents, equal to 4 cents at present exchange. They are master mechanics in masonry, carpentry, plastering, painting. They make the hardware and bronze work by hand.

Until recently there were no woodworking mills in China. The custom is to deliver huge logs to the site; the foreman marks the end of the logs for all detailed sizes of mouldings and trim and the log is whip-sawed by two workmen. The lumber is stacked 30 to 40 feet high to air dry in the hot sun.

No building is built in less than a year, as time means nothing.

There is no leaking of brick walls. The masons first pick up the brick and cover the ends and beds with mortar, smooth it out, then lay the entire unit, but

don't forget that labor is 40 cents a day for 10 hours' work.

The best method to hurry work is to give the masons a pack of cigarettes.

Thieves' Union: China has a Thieves' Union, and unless the contractor contributes to it, he will be minus expensive materials.

Execution of work is very high class. The mechanics take great pride in their work, and really excel.

Building costs are about the same as in the United States. Cheap labor is offset by imported materials. The American Club in Shanghai paid $150 per 1,000 for ordinary $25 face brick, but to get around this, the facades are now laid up with $1/2 \times 2\frac{1}{4} \times 8\frac{1}{4}$-inch face brick tile, plastered to locally handmade brick.

Cement plaster and concrete: You never see hair checks in cement plaster in China. The cement is slow-setting and walls do not leak.

DEFENSE HOUSING PROJECTS

Cutting in half the time normally required to prepare architectural plans for a defense housing project, the United States Housing Authority has completed working drawings and standard specifications quickly adaptable to the requirements for various localities throughout the nation.

This material, prepared by the USHA Technical Division, is designed to assist local architects on defense housing projects. Its use will enable them to conserve as much as fifty per cent or more of the time normally required to complete a set of working drawings. It includes:

(1) A series of superstructure working drawings to which the local architect need add only the foundation requirements and prepare the necessary site and utility plans;

(2) A "Standard Specification" dummy;

(3) Directions for using plans and specifications.

The first of the series of superstructure working drawings, which is now available to local housing authorities where defense housing projects are located, is for homes built of frame construction. They include: One bedroom, one-story twin dwellings (two houses); two bedroom, one-story twin dwellings (two houses); three bedroom, one-story twin dwellings (two houses); four bedroom, one-story single (one house); two-story building comprising eight one-bedroom flats. With the exception of the flats, all are designed for individual heating systems using coal fuel.

The USHA Technical Division also has under way plans for other types of dwelling units, different types of construction, and varying heating systems and fuel. These will give a wider choice to meet specific local housing project requirements. Detail grouping of units for site layouts and possibilities for the development of the site plan will be shown.

ENGINEERS' CONVENTION

The ninth annual meeting of the Structural Engineers Association of California was held in Bakersfield with a goodly attendance from both the Northern and Southern Sections. The program included discussion of 1941 legislation; Notes on the Use of Pre-Stressed Concrete by Chas. D. Wailes, Jr., Emergency Public Works in the 11th Naval District by J. T. Mathews; Earthquake Studies, by George Housner; Progress Report on Reinforced Brickwork, by Paul Jeffers; Recent Developments in the Use of Light Gage Steel Sections for Walls, Floors and Roofs, by Walter R. Steyer, and Participation of Structural Engineers in Government Defense Work by W. C. Tait, Vice-President of the Northern California Chapter of Associated General Contractors.

An interesting feature of the second day was a symposium on Glued Wood Structural Framing, Wm. E. Wilson, chairman. One of the most successful projects of this nature is a recently completed theater in Seattle and described in detail in this issue of Architect and Engineer.

FREDERICK WHITTON

Death followed an appendicitis operation to Frederick Whitton, 62, of San Francisco and Berkeley, on September 16.

Mr. Whitton was designer and builder of several of the largest hotels, industrial plants and office buildings in California, including the Remar Baking Company plant in Oakland, the O'Connor Moffatt Building, and the Schmidt Lithograph Tower in San Francisco, the Eureka Inn, Feather River Inn and the Petaluma Hotel.

A native of Kansas, he won his bachelor of arts and masters' degrees at the University of Wisconsin, where he was a member of Phi Beta Kappa and Delta Upsilon.

A resident of Berkeley since 1907, he was one of the organizers of the Berkeley Tennis Club, a former director of the Mount Diablo County Club, past president of the San Francisco Commercial Club, and a member of the Commonwealth Club. He was CWA administrator in San Francisco in 1933 and 1934.

ARCHITECTS AT DEL MONTE

A complete report of the architects' convention at Del Monte will be published in this magazine next month. Harris C. Allen will prepare the material. Subjects of exceptional interest to the profession were discussed.

GEORGE A. SCOTT SAYS:

"A building or residence constructed with Concrete Grid Forms is quiet, easily heated and has a luxurious atmosphere. This method of building is positively the way to make a good building better."

W.P.A. CONSTRUCTION SCORED

Concluding their national defense conference at the Palace Hotel, San Francisco, Western States executives of the Associated General Contractors on September 16 passed a resolution petitioning the Associated General Contractors of America, the National Defense Commission, Federal, State and public officials and representatives of labor to "immediately protest the unwarranted extension of WPA activities" into national defense construction and building projects.

Condemning WPA building methods on airports, highways, camps, cantonments and other military projects as "inefficient, extravagant, slow and backward," the conference pointed out that continued WPA activity in this field would "seriously jeopardize" the national defense program, impose "unnecessary hardships" on young men conscripted into military service, and cause "serious interference and delay in their military training."

The resolution stated that the performance of private enterprise in completing national defense projects "in record-breaking time at costs below those estimated by military officials" demands that the private construction industry's ability to produce in the shortest possible time at the lowest ultimate cost" be fully recognized.

Illustrating this point, Floyd O. Booe, secretary of AGC Northern California Chapter, called attention to the comparative conditions of Camp Ord and Camp Clayton, both in Monterey County. "At Camp Ord, where approximately 2,000 WPA men have been working for months, 10,000 trainees are still waiting for shelter," Booe declared. "Contrast this with Camp Clayton, which will be about the size of Beverly Hills in area, and which will be finished and ready for occupancy within 90 days under the guarantee of private contractors now building it."

Reviewing the labor phase, the resolution pointed out that men now regularly employed in the construction industry "are being forced to compete with a substandard relief wage scale and the substandard methods and inefficiency of WPA workmen in national defense construction." But that if private industry's facilities are used under the contract method, "WPA clients may be transferred in large numbers from the charity status of relief to an independent, self-supporting status as employees of private enterprise."

Conference hosts were Stanley A. Ball, president and Floyd O. Booe, secretary Northern California Chapter, A.G.C. William C. Tait, vice-president of the Central California Chapter, acted as chairman.

JOINS SEATTLE FIRM

Daniel E. Lamont has joined the architectural firm of Arthur L. Loveless and Lester P. Fey, 711 Broadway North, Seattle. Mr. Lamont recently completed several years service with the Federal Housing Administration.

ASK FOR OFFICIAL'S RESIGNATION

Immediate resignation of Frank O. Dunbar, chief of the Division of Enforcement of the California State Board of Architectural Examiners, is asked in a resolution adopted at a meeting of Southern Section, State Association of California Architects, held September 13. The resolution was addressed to Governor Olson and also to Dwight W. Stephenson, director of the Department of Professional and Vocational Standards, and to the members of the Board of Examiners.

The resolution criticises Dunbar with the assertion that he has failed to investigate or prosecute violations of the act regulating the practice of architecture.

The resolution was proposed after a presentation of asserted abuses of the architectural profession by Vincent Palmer, chairman of the association's professional and betterment committee.

Palmer showed lantern slides of asserted violations of the law prohibiting architectural claims by unregistered architects to the 200 persons present. The Association's Southern Section represents a membership of 700.

David Witmer, president of the Board of Examiners, Southern Section, who attended the meeting with three other board members, advised tabling the resolution "until further investigation." The other board members were A. M. Edelman, Ben H. O'Connor and Winsor Soule.

TWO MILLION DOLLAR HOUSING PROJECT

Naramore, Grainger and Johanson is the name of a temporary architectural firm recently formed by Floyd A. Naramore, Clyde Grainger and Perry B. Johanson to prepare plans for the 600-unit, low-cost housing project, estimated to cost $2,003,000, and which will be started this fall by the Housing Authority of the City of Bremerton. An office has been established in the Central Building, Seattle.

Construction work on the project will start by November 15 and the first units will be ready for occupancy by April 1, 1941, according to E. C. Searle, Executive Director, Bremerton City Hall. The 600 frame houses, both single and duplex, will be built in groups of four on the 89-acre site adjoining the city on the north along Washington Narrows.

WASHINGTON STATE CHAPTER

Jean Hebrard, professor of architecture and town planning, University of Michigan, was the principal speaker at the monthly meeting of the Washington State Chapter, A.I.A., Thursday evening, September 5, at the College Club, Seattle, President Floyd A. Naramore presiding.

Motion pictures in color of the joint expedition of the Oregon and Washington Chapters to Grand Coulee Dam last year were shown by Vice-President William J. Bain of the Washington group, who also showed pictures of Cape Cod and Williamsburg houses which were exhibited at the national A.I.A. convention.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

449. BESTILE

When architects and builders looked upon the material as a less expensive substitute for glazed tile, that was one thing, but when Bestile Manufacturing Company started to manufacture panels of mirror-like smooth texture in various pastel shades for kitchen and bathroom walls, that was something else. Bestile is made of heat-tempered wood fibre with baked-on enameling. It gives unusually beautiful effects. Send for this company's latest literature. Use the coupon below.

450. HOW TO DO THINGS

Innumerable phases of building maintenance are included in the new handbook issued by The Flexrock Company. In this 74-page book some of the educational suggestions to be found are: how to install floor grids, patch roofs economically, make feather-edge patches stick to concrete and many more items of interest. There are over 150 illustrations. This is yours for the asking.

451. STOP LEAKS

Raintite Manufacturing Company has a new broadside which depicts the rather astonishing number of materials they manufacture. All of these products are for water, weather, and damp-proofing. A price list also is included. An automobile cream is even listed among these various items. Send for this broadside—the coupon will bring you a copy.

452. BETTER AIR

Plandaire Inc., has a book of specifications with diagrams included to illustrate their "Kno-Draft" Air Distribution Devices. Those interested in air conditioning will find this book of great help and manifold interest.

453. GOOD LIGHTING

The Northern California Electrical Bureau has a new booklet just out and like their other booklets this one is most interesting and well arranged. It gives sound advice on proper lighting in the home which is an important health feature in modern living. Send for a copy by using the coupon.

454. CELOTEX PRODUCTS

"The Quiet Forum," Celotex's little magazine, is out again. This is always worth while and contains information of interest to architect and builder as well as to home owner. Send for a copy.

455. FIREPLACES

And here is a new book to be given its place in this column. Put out by The Donley Brothers Company it has for a rather intriguing title, "Book of Successful Fireplaces and How to Build Them." We are confident readers will find a wealth of useful information in this book. The coupon will bring you a copy—use it.

456. VALUABLE CHART

An Air Temperature Rise Chart has been put out by the Fedders Manufacturing Company. This is in connection with this company's "Type K" heating coils. The chart is in the form of a heavy folder and is very complete. Use of the coupon will bring you one.

457. 100% GOOD AIR

Universal Window Company have a new folder containing some highly important information on this popular window. The illustrations give the various types of public and semi-public buildings in which the Universal Window has been installed—a window particularly adapted for use in schools where the best in windows is an absolute necessity. Send for this folder by clipping out the coupon below.

458. ACOUSTICS

Industrials Incorporated have a broadside depicting "Softone" Acoustical Tile, and "Softone" Acoustical Plaster. Both of these products have been used in public buildings where acoustics are a problem.

459. TYPE OF WIRE

"Dilec" safecoat wire is the subject treated in a new booklet issued by National Electric Products Corporation. All the types of this wire for various installations are described and the booklet has tables and specifications. Send for a copy.

460. THE "VITAL ZONE"

Ilg Electric Ventilating Company have issued a booklet in which they tell what happens in the "Vital Zone" where people work and play. This is very pertinent material and should be of more than considerable interest. The coupon will bring a copy—it is placed below for your use.

461. HOME HEATING

"Basic Ways to Heat the Small House" is the title of a broadside from the McDonnell & Miller Company. The heating of small houses is an important feature of modern building and this sheet has information of interest to offer to its readers.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

Architect and Engineer
68 Post Street
San Francisco, Calif.

Please send me literature on the fo
items as checked below. This
places me under no obligation.

449 ☐	455 ☐
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454 ☐	460 ☐

461 ☐

My Name.....

Name of Company.....

Street.....

City.....State.....

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Bond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.00
3 ply per 1000 ft. roll	6.25
Sisalkraft, 500 ft. roll	5.00
Sash cord com. No. 7	$1.20 per 100 ft.
Sash cord com. No. 8	1.50 per 100 ft.
Sash cord spot No. 7	1.90 per 100 ft.
Sash cord spot No. 8	2.25 per 100 ft.

Sash weights cast iron, $50.00 ton.
Nails, $3.50 base.
Sash weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
City gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

SAND—	Bunker	Delivered
River sand	$1.50	$1.90
Lapis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80	and $2.20
Del Monte white		50c per sack

CEMENT (all brands, common, cloth sacks) $2.72 per bbl. f.o.b. car; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or deliv., 80c per sack. (Less 10c per sack returned, 2% 10th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White } 1 to 100 sacks, $2.00 sack, warehouse or delivery;

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c oer cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.
(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	13/16x2¼" T&G	3/8x2" T&G	¾x2" Sq.Ed.
Clr. Otd. Oak	$144.00 M	$122.00 M	$141.00 M
Sel. Otd. Oak	118.00 M	101.00 M	114.00 M
Clr. Pla. Oak	120.00 M	102.00 M	115.00 M
Sel. Pla. Oak	113.00 M	92.00 M	107.00 M
Clr. Maple	125.00 M	113.00 M	

Wage—Floor layers, $10.00.
Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron — Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$30.00 per M
No. 2 common	28.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	22.00 per M
1x4 No. 2 flooring VG	58.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	70.00 per M

Slash grain—

1x4 No. 2 flooring	$45.00 per M
1x4 No. 3 flooring	42.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.10 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded)
5/16" 3-ply and 48"x96" ..... $32.50 per M
"Plywall" (wallboard grade)—
¼" 3-ply 48"x96" ..... $37.50 per M
"Plyform" (concrete form grade)—
⅝" 5-ply 48"x96" ..... $110.00 per M
Exterior Plywood Siding—
7/16" 5-ply Fir ..... $ 90.00 per M
Redwood (Rustic) ..... 85.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $100.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot. Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M.

For smaller work average, $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work	per yard 42c
Three-coat work	per yard 60c
Cold water painting	per yard 10c
Whitewashing	per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.50
2 coats, lime mortar hard finish, wood lath	.85
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	.90
Ceilings with ¾ hot roll channels metal lath plastered	1.80
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.30
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.40
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50
Wood lath, $5.50 to $6.50 per 1000.	
2.5-lb. metal lath (dipped)	.19
2.5-lb. metal lath (galvanized)	.21
3.4-lb. metal lath (dipped)	.22
3.4-lb. metal lath (galvanized)	.24

¾-inch hot roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations.
$13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.60 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—
From $70.00 per fixture up, according to grade, quantity and runs.

Roofing—
"Standard" tar and gravel, $6.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $6.50 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Cooper, $16.50 to $18.00 per sq. in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ..... 8.00 Square
5/8 x 16" — #1 Cedar Shingles, 5" Exposure.... 9.00 Square
4/2 #1-24" Royal Shingles, 7½" Exposure ..... 9.50 Square
Re-coat with Gravel, $3 per sq.
Asbestos Shingles, $15 to $25 per sq. laid.
Slate, from $25.00 per sq., according to color and thickness.
1/2 x 25" Resawn Cedar Shakes, 10" Exposure 10.50
3/4 x 25" Resawn Cedar Shakes, 10" Exposure 11.50
1 x 25" Resawn Cedar Shakes, 10" Exposure 12.50
Above prices are for shakes in place.

Sheet Metal—
Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)
Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural
$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—
$80.00 to $120.00 per ton, set.

Stone—
Granite, average, $6.50 cu. foot in place.
Sandstone, average Blue, $4.00, Boise, $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—
Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.— (See Dealers)
Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—
Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—
40c per square foot and up. Installation extra.

SAN FRANCISCO BUILDING TRADES WAGE SCALES

All crafts 8 hour day (except as otherwise noted) and 5 day week. Effective as of May 1, 1940.

CRAFT	Journeymen Mechanics
Asbestos Workers	$10.00
*Bricklayers	10.50
*Bricklayers' Hodcarriers	7.50
Cabinet Workers (outside)	10.00
Caisson Workers (Open)	8.80
Carpenters	10.00
Cement Finishers	10.00
Electricians	11.00
Elevator Constructors	12.00
Engineers (Portable and Hoisting)	10.00
Glass Workers	9.68
‡Housesmiths, Ornamental Iron (Shop and Outside)	10.00
Housesmiths, Reinf. or Rodmen	10.50
Ironworkers (Bridge and Structural—Engineers)	12.80
Laborers (Building and Common)	6.50
*Lathers	9.60
Marble Setters	10.50
Millwrights	10.00
Mosaic and Terrazzo Workers	8.00
†Painters	8.75
Pile Drivers and Wharf Builders	11.20
Pile Drivers Engineers	12.80
*Plasterers	10.00
*Plasterers (Hodcarriers)	8.40
Plumbers	11.20
Roofers	9.68
Sheet Metal Workers	10.00
Sprinkler Fitters	11.00
Steamfitters	11.00
Stair Builders	10.00
Stone Cutters	9.00
*Stone Setters	10.50
Tile Setters	11.00
Welders, Structural Steel Frame on Buildings	12.80
§Dump Truck Drivers, 2 yards or less	7.00
§Dump Truck Drivers, 3 yards	7.50
§Dump Truck Drivers, 4 yards	8.00
§Dump Truck Drivers, 5 yards	8.00
§Dump Truck Drivers, 6 yards	8.50
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	8.00
3 yards	8.57
4 and 5 yards	9.14
6 yards	9.71

EXPLANATION:
*—6 Hour Day.
†—7 Hour Day.
‡—Term "Architectural Iron" no longer used. This craft "Ornamental Ironworker."
§—Dump Truck Drivers work 7 HOURS ON PUBLIC WORK, 8 HOURS ON PRIVATE WORK; starting time 7:30 A.M.

MODERN PLASTICS EXHIBIT

The chemist is easing us into a new age—an age that is full of wonders and magic. We are entering upon the Plastics Age, an era that is destined to bring the American high standard of living to an even higher level, a period that is bringing inexpensive but artistic luxuries to millions, giving comfort, adding conveniences and spreading contentment. The evolution of plastics has made possible the mass production of articles that were formerly denied to the masses because of price and lame production methods. This fact is concretely illustrated by nearly 1000 plastic pieces entered in the recent Fifth Annual Modern Plastics Competition and now on free exhibition at 122 East 42nd Street, New York City.

With double the number of entries of any previous year, the competition and its thirteen classifications of products, emphasized the rapid progress that this industry is making. From plastic football helmets and ladies' shoes to a complete dining room suite and a 400-foot ceiling in plastics, perfected materials and superior handling methods, are providing the world with an array of products that have emerged from dreamers' realms into glorious realities.

Kitchens and bathrooms are feeling the effects of plastics and revelling in the luxurious and efficient appointments never before possible at moderate prices. Tiled bathrooms with porcelain fixtures were once known only by millionaires, but now plastics are helping to bring color and comfort even to those on a budget. Important news to shower lovers is a new shower head molded of plastic in clear and plastic colors that is on the road to making history. It has a fine needle stream that is invigorating and stimulating. One manufacturer who is putting out the shower head under his own name claims that it is the best model ever made. Housewives like it, because they can now carry out their bathroom color schemes to the last detail. Husbands, who sometimes have to turn plumbers, like it too—particularly the clear transparent model, for they can see how it works.

The maid in the kitchen likes plastics, although she may not tell you as much. But her lightweight, colorful broom with its plastic cap on the handle and matching cover topping the bristles, represents the first time that the broom has been improved upon since man first began using such an implement.

The realms of architecture, interior design and decoration have been invaded by plastics, but the last year has proved that these materials are not simply a fad or passing fancy as far as the architect and interior designers are concerned, rather something of permanence to be reckoned with. Accordingly, we find more and more furniture in saner and better designs coming from the studios and the fabricators' shops. Terrace furniture made of extruded plastic strips woven in the manner of reed and rattan is winning high favor because of its smart appearance and its amazing durability. A new type of decorative laminated material augurs much in the way of furniture, panels and screens to come. This plastic, although similar in principle to many of the laminates now on the market, offers more to the interior designer because paintings, fabrics and individual designs can be had in true color. Gold, silver and bronze, as well as vibrant tropical colors, are offered to the designer in as personalized a manner as he wishes.

Although the initial development of plastics was slow, during the last few years their sky-rocketing success has been phenomenal. There are more than 160,000,000 pounds of plastics produced in a single year in the United States, and during the last five years, new plastics have been developed at the rate of almost one a year.—Contributed.

NEED FOR PUBLIC HOUSING

(As set out in the San Francisco Housing Authority's application)

With one USHA-aided project already completed and occupied, two others under construction and four more under loan contract, San Francisco has received approval of a new loan for an additional development to relieve an acute shortage of homes for low-income families.

"Holly Courts," 118 units, has been completed, while "Sunnydale," 772 units and "Potrero Terrace," 469 units, are under construction. The four other projects planned under previous loan contracts will provide a total of 976 units. Including the 150-unit project just approved, San Francisco upon completion of the eight developments now under loan contract, will have a total of 2,485 badly needed public housing dwellings.

The development planned under the latest loan contract will consist of 150 units in 3-story apartments. The kitchens and bathrooms will be equipped, and provisions will be made for children's play areas and indoor space for the tenant families' social and recreational activities.

A WPA Property Survey has indicated that there are about 59,000 dwelling units occupied by San Francisco families who, because of the lack of decent homes at rents within their means, are now living under substandard housing conditions.

Private enterprise has failed to provide housing for low-income families, the application stated.

NEW FORM OF STEEL PARTITIONS

There is a new form of steel partitioning which is easier and cheaper to erect than a plaster partition and which comes in wood grained finished as well as solid colors. But even more surprising—it can be packed up and taken with you when you decide to move to another location! This method of panelling was used in the first all-steel offices in Rockefeller Center.

STAGE EQUIPMENT, WHITTIER U. H. S.

Following is a brief description of the stage equipment installed by R. L. Grosh & Sons Scenic Studios, Hollywood, in the Whittier Union High School:

Dimensions:

Proscenium opening—50′ wide x 20′ high.

Distance from wall to wall—100′.

Depth of stage from proscenium arch to back wall—40′.

Stage floor to gridiron—60′.

Clearance above gridiron to roof—8′.

This entire area is of clear space which makes it possible to accommodate the largest type of productions that may be presented in the auditorium from time to time. The complete stage is equipped with the latest type of equipment to accommodate the full size of this stage. All equipment is of the unit type which makes it possible to reduce the size of the stage setting to accommodate the smallest production and still maintain the proper proportions. In two minutes a complete change of the entire stage setting can be made from a modest size living room to a full stage atmospheric exterior.

Asbestos Curtain: Overall size 52′ wide x 22′ 6″ high. This curtain is the latest type asbestos now being used, just recently set up in the Underwriter's Code and has a wire cloth inner-woven throughout the entire curtain. The outer hems are of 6″ metal and are fitted with ball bearing guides spaced approximately 18″ on center throughout the full height of the curtain. These guides operate in the metal smoke grooves. The top of the curtain is fitted with a metal lip which fits into a smoke pocket at the top of the proscenium arch and completely seals the curtain when lowered into position. The weight of this curtain, including the attached rigging, is approximately 4000 pounds. The operation of the curtain is completely automatic, with release lines which automatically close the curtain in case of emergency.

Valance Border: This hangs directly back of the asbestos curtain and is a material of Rayon pile, of a special color to harmonize with the proscenium arch. The front curtain is of the same material and is installed with a dual control counterweight unit so that the curtain may be used either as a draw or straight lift.

Grand Drapery and Tormentor Wings: The purpose of grand drapery and tormentor wings is to form a frame of masking around all types of settings used in auditoriums. The wings are installed on counterweight unit and steel tracks to give the necessary flexibility. These are all unit control and can be increased or decreased by single operation.

Speaker's Curtain: This curtain is a double-faced fabric, the one side being a gold Rayon finish while the reverse side is a neutral tan. The curtain can be reversed, using either side and is also on dual control counterweight the same as the front curtain.

Picture Screen Frame: This hangs directly back of the speaker's curtain, the overall size being 40′ wide x 24′ high. This entire frame is trussed with adjustable fittings for holding the sound screen in place. The maskings are fitted to the frame and the entire unit is installed on counterweight unit and can be raised to the gridiron when not in use.

Unit Type Cyclorama: The cyclorama is made up of a corded Repp material vibrated in three colors which makes it acceptable to any colored lights that may be used. This is then backed up with black velour and the entire set is made reversible.

The side sections of the cyclorama are installed on worm gear pivot arms and slot tracks which makes it possible to extend the cyclorama to the maximum width of the stage and the full depth for graduation exercises or large productions. It is possible to reduce this set to any width that may be required for small class plays. Each unit is rigged so that side sections can be brought on stage or off stage by single control.

The back section of cyclorama is a double rigged unit which also operates on a counterweight set. This permits openings in various positions that may be required for a certain type production.

Paint Frame: This frame is the same type used in all of the largest studios and is especially made to receive drop curtains of any size and complete interior settings and other frame scenery. This is controlled by counterweight unit and arbor with adjustable weights to compensate the load that is being used on the frame. The latter is set in dead center of the arch which permits the students to lower the frame with the partly finished background on same and gives them the opportunity of seeing the work in process from the auditorium.

On stage left there is a paint bridge fitted with all of the facilities for mixing the paints and the various types of sizing used in scene painting. Directly from this paint bridge, extending across the full width of the frame, is a bridge with the palettes from which the students actually do the painting.

Counterweight Locking Rail: This is on stage right and controls all hanging pieces, including the border lights. These lines are all fitted with tension type floor blocks which keep the lines taut at all times and each set is fitted with a safety rope lock.

The approximate 15,000 feet of cable lines with their hanging pieces can be cleared to the gridiron by one man, operating within a period of five minutes.

BOOKS FOR YOUR LIBRARY

Short Reviews by EDGAR KIERULFF

"Engineering Surveys," by Rubey-Lommel & Todd; The Macmillan Company, 60 Fifth Avenue, New York; price, $3.50.

An excellent and compact handbook containing data on engineering surveys together with plates, tables and complete logarithms. There has been no new issue of this very worth-while text book in several years. The present volume has had complete revision and has been brought up to the new standard engineering requirements. A handbook that engineers will find of greatest value in the field.

"The Garden Clinic," by Laurence Blair; The Macmillan Company, 60 Fifth Avenue, New York; price, $2.00.

Essentially a manual, attractive and different from the general run of garden books in that it is a pictorial how-to-do-it book. The text has been written to amplify the drawings. There are about one hundred pictures and well chosen text. The step-by-step methods of cultivation are exemplified. The main object of this book is to tell gardeners how to best care for their plants in order that they may achieve good results.

"Houses for Good Living," by Royal Barry Wills; **"The Modern House in America,"** by James and Katherine Ford; The Architectural Book Publishing Company, 112 West 46th Street, New York; price, $9.00 (the two books).

These two books published at the same time and offered by the same publisher, contain vital information on modern houses. In "Houses for Good Living" we find the older traditions brought up to meet the new standards. In "The Modern House in America" we find that new departure in architecture wherein we are introduced to the actual, modern house—in thought, in feeling and in actuality.

GLASS BLOCKS AFFECT AIR CONDITIONING

Old Sol has given the air conditioning engineer an intricate problem where walls of glass block construction are specified. The question is: how much additional cooling capacity must be provided in an air conditioning system to compensate for the solar heat transmitted through glass blocks? To assist the engineer in obtaining such fundamental engineering data the Committee on Research of the American Society of Heating and Ventilating Engineers outlined a research program, utilizing a miniature house for investigation at its own laboratory in Pittsburgh.

The structure is essentially a large heavily insulated test cubicle mounted on a turn-table so that the glass block panels may be oriented to the sun in any direction. The cubicle is divided into two equal compartments by a solid partition between the identical glass block panels. There is a door in the rear of each compartment for access to instruments and the introduction of ice.

Transmission of heat through each glass panel was measured by placing ice in each compartment and then measuring the quantity of ice melted. One glass panel was shaded while the other was allowed to receive the full effect of old Sol's rays. The difference between the ice meltage in the unshaded compartment and the shaded compartment gave the measure of the sun heat transmitted by the unshaded glass block panel. In addition to the amount of ice meltage, measurements were made of intensity of sunshine before and after it had passed through the unshaded glass block panel, the temperature of the air inside and outside the compartment, the temperature of the face of the panels, wind direction, wind velocity and other attendant conditions.

SAN FRANCISCO AIRPORT

The program of construction at San Francisco Airport under a $2,850,000 bond issue has been given impetus by the proposed leasing of facilities to the United Airlines. Following the consummation of the lease, a new hangar and an office building will be constructed for the company's use.

The enlargement of the landplane port, construction of a seaplane port, improvements in the paving and lighting on the field, are in progress, or are contemplated in the near future under this program. The engineering work of the airport is under the general direction of L. T. McAfee, assisted by L. W. Stocker, and George D. Burr.

PROVISIONAL CERTIFICATES TO PRACTICE

Provisional certificates recently were granted by the California State Board of Architectural Examiners, Northern District, to John Cooper Funk, 1525 Arch Street, Berkeley, and Alton S. Lee, 1423 Bay Street, Alameda.

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SPOKANE ARCHITECT TURNS AVIATOR

Flying not very high over the dense alpine forests of Montana with darkness closing in, lost, and with gasoline for less than ten minutes flying time is no spot for an architect. That's where Ed Peterson, who has been turning out a lot of work in the modernistic style around Spokane, found himself the last of July.

He was leading two other fellows towards Billings, and they had three brand new Porterfield Cub planes just purchased at the factory in Kansas City. One of the planes had only five minutes' flying time left. The alpines didn't look like comfortable landing. But they got down, of course, in a tiny clearing, with only a few quarts of gasoline between them. The putt-putts always get down.

Flying has been Ed Peterson's avocation for more than a year, and he now proudly possesses a limited commercial license. He intends using his new plane to visit his out-of-town jobs, mixing business and pleasure, and saving precious hours of traveling at the same time.

Taking delivery of that plane was Ed's two weeks' vacation this year, and a newspaper clipping pinned to the wall of his office testifies to the thrilling seat-of-his-pants flying that marked the trip. Ed was squadron leader of six of the new Porterfields flying out of Kansas City for Spokane, and he led them smack into a thunderhead which scattered them. Three reached St. Joseph, Mo. Ed and two others were forced down in a wheat field. Here the wind was blowing so strongly that no one man could hold down his ship. Ed's plane blew into a barbed wire fence and tangled itself sufficiently to hold it. Another turned over. The three men ganged up on the third ship and tied it down. And who said architectural work isn't a hazardous occupation?

Ed a while back won first and second prizes in the architectural competition sponsored by the Spokane Better Housing Committee for design of a 4-room house to sell for $4000 on a designated building sight. —Pacific Builder and Engineer.

NEED MORE BUILDING MATERIAL DATA

All governmental building agencies should freely put their experience at the service of the building industry as a whole, declares a report of the Committee on Structural Service of the American Institute of Architects of which Professor Charles W. Killam of Harvard University is chairman.

"Federal bureaus with experience gained from constructing and maintaining great numbers of buildings ought to publish far more information than they do as to the results of their experience," the report says. "They ought to publicize their failures as well as their successes, not only in matters of design, but the failures and successes of materials, mentioning the materials by name.

"In spite of some attempts to exchange experiences between the agencies themselves there seems to be

less cooperation in Washington than there should be. There is still less cooperation with the building industry as a whole in supplying information.

"As for legal attack from producers whose materials were criticized, the experience of the American Medical Association in publishing reports on proprietary preparations and the experience of consumer organizations in publishing comparative reports on materials and equipment by name would seem to show that we need not fear damage suits in any attempts to find out and report the facts. Here again cooperation of the producers might assure us of immunity from legal trouble."

In making public the report of the committee, the Board of Directors of the Institute pointed out that the thorough and systematic assembling of information on new materials covered a broad field of activity in the construction industry in which there is opportunity for definite service by the Institute and its 70 Chapters located in all parts of the country.

"In this service the laboratory facilities of the various educational institutions of the nation should be available for research work on building materials and for the preparation of reports of fact with respect to materials and methods of construction," the directors said.

"The rapid development of new materials and construction methods has centered attention on the inadequacy of building codes in general to provide for the application of new inventions to building construction. A re-study of the building codes of the country with a view to the adoption of basic codes that would be applicable not only to individual states but which might be extended beyond their boundary lines is urgently needed. When developed, such basic codes may be made effective through the passage of legislative enabling acts which would delegate to non-political, technical boards the duty of prescribing detailed regulations consistent with the police powers to regulate for safety, health, and welfare.

"A strong cooperative movement is essential to the success of such an undertaking. It should include, in addition to the Institute, the American Society for Testing Materials, the National Bureau of Standards, the Producers' Council, engineering societies, labor, financial institutions, and various civic and technical bodies having a logical interest in this movement."

Other members of the Structural Service Committee are Abraham Levy of Philadelphia, vice chairman; Alfred E. Barnes of Kansas City, Mo.; John Cobb Dennis of Macon, Ga.; Harry A. Herzog of Portland, Ore.; Walter G. Jameson of Peoria, Ill.; Henry A. Martin of Rochester, N. Y.; N. W. Overstreet of Jackson, Miss.; Roy Place of Tucson, Ariz., and John C. Thornton of Royal Oak, Mich.

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EMPLOYMENT OF UNLICENSED CONTRACTORS

The higher courts of California have from time to time rendered decisions that have a direct bearing on the application and interpretation of the Contractors' License Law.

In the case of Holm vs. Bramwell (20 Cal. App. (2d) 332, 67 Pac. (2d) 114) decided in the Third Appellate District Court, the latter was required to pass upon the following facts:

An owner of five lots made a contract with a duly licensed general contractor to construct buildings on these lots, agreeing to pay him the cost thereof, plus 10 per cent. The general contractor entered into a subcontract for the brick work with an unlicensed contractor. Prior to starting the actual work a license was issued to the subcontractor. He was paid in full the amount of his subcontract by the general contractor. The owner refused to pay the general contractor, contending that the general had awarded the subcontract to an unlicensed subcontractor, which was contrary to law, and therefore invalid.

The general brought suit to recover the amount paid the unlicensed subcontractor along with other unpaid items. The court rendered a judgment in favor of the general contractor, which judgment did not include the amount paid by the general to the unlicensed subcontractor, holding with the contention of the owner that the subcontractor was not qualified to make a valid contract, because of the fact that he was unlicensed at the time when the bid was accepted. In its opinion, the court stated that it was the duty of the general contractor to ascertain whether the subcontractor with whom he proposed to deal was licensed, and that the general contractor was bound to know that the Contractors' License Law requires all contractors and subcontractors to be licensed. — California Licensed Contractor.

UNIFICATION

Eighteen out of twenty-five existing state architectural associations have affiliated or are in the process of affiliation with the American Institute of Architects, according to Kenneth C. Black of Lansing, chairman of the Institute's Committee on Objectives of State Societies.

"This progress has demonstrated that the unification of the architectural profession presents a complex problem," he stated. "It has become clear that all localities cannot be dealt with through a single method of organization. Local autonomy must be recognized in order that unification may best be accomplished.

"In some states, where population densities are great and where a number of Institute Chapters may exist, the formation of state organizations may prove the best method. In certain other states, where the boundaries of Chapters may be co-terminus with those of the state, it is possible to accomplish unification by extending the privileges of Chapter membership in the association grades to the registered architects of those states."

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CENTRAL VALLEY PROJECT

A portion of California's mighty Central Valley Project is in operation, several years ahead of original expectations, with the first water being delivered to the City of Pittsburg from the partly completed Contra Costa Canal.

Pittsburg, an industrial city of about 12,000 population, is 40 miles east of San Francisco.

Following several days of testing and flushing out the initial 20-mile section, fresh water was diverted into the canal from Rock Slough.

Hailing this milestone of progress on the Central Valley Project, United States Commissioner of Reclamation John C. Page in Washington, D. C., said:

"It is significant that the first utilization of this great multiple-purpose project is for domestic water service, which is recognized as the most important of all the many vital uses of water. The City of Pittsburg should be congratulated on being the first to be ready to receive Central Valley Project water.

"As construction proceeds and other features such as Shasta Dam, Friant Dam, and additional canals are completed, the benefits of the project will multiply both functionally and geographically.

"By conserving the Central Valley's precious water resources and regulating the flow of the Sacramento and San Joaquin rivers, the project will permit a restoration of year-round navigation far upstream, and will afford increased flood protection and supplemental irrigation for a great agricultural empire extending from Shasta County on the north to Kern County on the south.

"Salinity control, improved domestic and industrial water supplies, recreational development, and last but far from least, electric power production, are other useful purposes which will be served by this comprehensive Federal reclamation enterprise."

Another early customer for canal water under the temporary service contract executed by the Bureau of Reclamation and the Contra Costa

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People are writing Kraftile by the hundreds for new ideas in kitchen and bathroom planning. Many of these prospects have commissioned no architect as yet. If you are interested in establishing contacts with such prospective builders, write for information on Kraftile's "New Jobs Ahead" plan. Address C. W. Kraft, Kraftile Kilns, Niles, Calif.

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Water District is to be the Columbia Steel Company, a subsidiary of United States Steel Corporation, which is rushing work on a pipe line connection between the canal and its Pittsburg mill.

The first 20 miles of the canal, including the intake works near Knightsen and four pumping plants near Oakley, have been completed as far as a point three miles west of Pittsburg.

The pumping stations, located along the canal between mile 4 and mile 7, lift the water to an elevation of 124 feet from which it flows by gravity the remaining distance through an area of orchards and field crops in need of supplemental irrigation water, and above several cities and industrial plants suffering from inadequate water supplies. Each station has space for six pump units, four of which have been installed initially, and only one of which is being used for the interim operation.

Under eventual operation of the Central Valley Project an adequate all-year water supply for the canal will be assured by Shasta Reservoir on the upper Sacramento River 200 miles to the north.

Pending permanent regulation of the river by Shasta Dam, which is scheduled to be completed in 1944, the potential agricultural, domestic, and industrial water users along the completed portions of the Contra Costa Canal can be served only with such water as may be available at the Rock Slough intake. Construction of lateral canal systems is necessary before distribution of water can begin to farmers in the area.

"MIRACLE HOUSES"

"Miracle houses" costing $3,000, built and occupied by workers who are not members of the building trades by vocation, are largely solving the low-cost housing problems in towns and rural areas throughout Nova Scotia, Professor S. H. Prince of Dalhousie University, chairman of the Nova Scotia Housing Commission, declared at the Columbia University summer session.

The homes, no two of which are alike, have received the name "mira-

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cle houses" because of the great contrast between the new buildings and the old rented quarters hitherto lived in by workers.

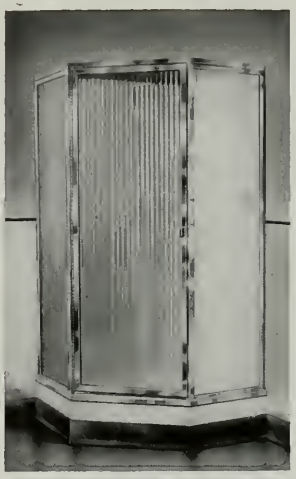
"The magic formula which has made possible the building of these dwellings, which can be paid for at $9 a month, is a new form of institutional cooperation participated in by the state, educational institutions and churches," Professor Prince explained.

Taking part in the housing program are miners and rural workers from regions around Reserve Mines, Dominion, Glace Bay, and Whitney Pier in Nova Scotia. The government, Professor Prince said, furnishes various communities with low interest loans, legal aid, blue prints, architectural advice, and trained construction men such as carpenters and plumbers.

Schools in communities which have shown interest in participating in the housing program cooperate by offering instruction in the principles of home construction. After from six to eight months of training, workers who have been attending classes begin building homes — mostly two story frame houses—under expert supervision. Churches have cooperated in many instances by turning over to the workers land which would otherwise remain unused.

"The significance of the Nova Scotia Housing Plan lies in the stress it places on the building of communities rather than merely on the construction of homes," Professor Prince added. "Authorities today recognize that there can be no ideal home apart from a model community into which it is designed to fit. The outstanding feature of the program is the proof which it furnishes that workers who are not carpenters or plumbers can, under adequate direction, erect suitable dwellings.

"The individuality of appearance of the homes is in contrast to the unattractive sameness which characterizes low-cost housing schemes in many lands. A field lot of ample proportions adjoins each site thus making possible light agriculture, while parkways either have been or will be eventually constructed through the developments,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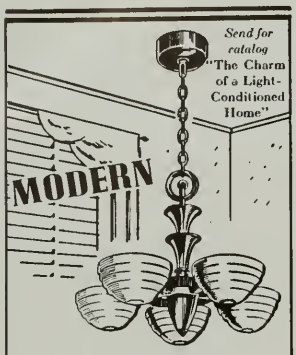

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which are usually built on the outskirts of villages.

"The department of agriculture of the Province cooperates by directing beautification schemes, including the planting of trees and hedges, and the department of highways is responsible for the construction of roads in the development and highways to nearby points.

"Although none of the new homes are palatial, still they are usually far better than the company houses owned by the mines throughout the region. Furthermore, while the workers, who devote their own time to the building of the houses, have to pay around $10 a month to rent a company house, they can buy a 'miracle house' at around $9 a month.

"A lull in the development of housing schemes is inevitable because of the war since government money is needed for other purposes, but a new and livelier interest in housing progress is bound to spring up in the next post-war era. It can be safely said that the success of the housing programs in England is to a great extent responsible for the high morale of its people today.

"The new developments in Nova Scotia have been largely restricted to rural areas where the type of industry present tends to make workers live in one locality for a long period of time. In the larger cities the problem of housing is being attacked from the viewpoint of furnishing low rents, thereby leaving the workers free from the restrictions of home owners and able to move to new communities where work is to be found."

"HOUSE OF THE DECADE"

America's ponderous lumber industry has joined hands in selecting California as the site of a mutually sponsored "House of the Decade" built in Studio City, near Los Angeles.

Dedicated in an impressive ceremony by Hugh Herbert, film celebrity and mayor of Studio City, this model home, known as the Certigrade Californian, is being sponsored by 36 lumber and allied associations from coast to coast.

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such a rapid rate in California that the state was chosen as the site for house No. 1 of this great project.

Of all-wood construction, the home is built of a wide variety of woods. Douglas fir went into the wall studding and bracing, West Coast hemlock was used for roof sheathing, red cedar shingles for roof and sidewalls, California redwood for exterior trim, knotty pine for some of the interior construction and Douglas fir plywood for flooring.

"YOU DID A GOOD JOB"

Judge Russel May of the Supreme Court of the State of New York: "Oscar Bergman, you are a marble and tile setter?"

"Yes, your Honor."

"I believe you know that that woman with a bandaged head, sitting in the front seat, was struck by a slab of marble falling off the wall in a department store?"

"I do, your Honor."

"And that the owner of the store is suing the marble contractor for defective workmanship?"

"Yes, your Honor."

"You have examined the wall and the marble slab?"

"I have, your Honor."

"How shall the court know whether you are qualified to testify as to the questions of defective workmanship in the falling of the marble slab?"

Bergman, reaching under his chair for a neatly-wrapped package: "Well, your Honor, I thought I might be asked that question, so I brought along this certificate from the New York Building Congress which says that I am an outstanding craftsman in my line of work."

Judge May: "Let me see it. Where did you get that?" . . .

Bergman: "At a ceremony when one of the Rockefeller Center buildings was finished. I did some marble setting there."

Judge May, looking up from a careful study of the certificate: Mr. Bergman you are accepted."

Flashback: Noon—a new building in Rockefeller Center—a freshly-plastered room—two hundred workmen in overalls seated in rows—a platform

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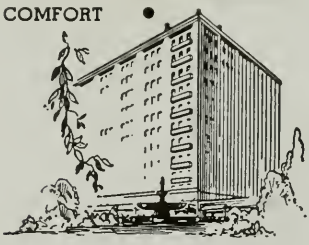

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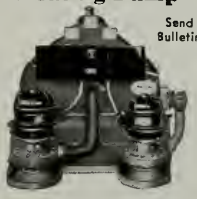

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draped with flags and bunting—on the platform, the architect, the contractor, a labor leader and Nelson Rockefeller.

Chairman of the Committee on Recognition of Craftsmanship of the Building Congress:

"Oscar Bergman, marble setter!" A man gets up from a front seat, drops his cap into the lap of a woman sitting beside him and with his eyes on the floor comes to the platform.

"Oscar, the New York Building Congress, from the quality of work you have done on this building, from your attitude toward your work, and the kind of influence you have had on the job and the spirit you have shown, considers you an outstanding craftsman and an honor to the building industry. This gold button is for the lapel of your coat and this certificate for you to take home." Handing him a nicely-framed certificate, "What will you do with it, Oscar?"

Oscar: "Well, right now I'm going to hand it to the Missus here, and maybe she'll hang it on the wall at home."

Chairman: "And then what?"

Oscar: "Well, maybe the kiddies will look at it and think they would like to get a certificate when they grow up; and the Missus says she is going to have the neighbors in."

Oscar wearing a broad smile goes back to his seat, hands the "Missus" the certificate and carefully adjusts his gold button in his buttonhole. Then fifteen or twenty mechanics in other trades are called up, one by one, to get theirs.

How do they feel about this certificate business? Well, how would you feel if you were presented with a certificate saying that your trade or profession considered you as one of the best?

About fourteen years ago the Building Congress, made up of all the elements of the building industry, felt that the part labor played in the building game never had been properly recognized; and that, due to uniform wage scales for building mechanics, the average mechanic was saying, "What's the use of working hard to be better than anybody else; what about this pride in your work when you're just plastering a wall or laying brick?" And so, due to lack of incentive, the quality of work was falling off and any real spirit of craftsmanship was dying out. The Congress said, "What are we going to do about it, for this kind of thing affects not only the quality of work but the quality of the workman?"

Now everybody knows that we all like to be recognized, to be called by name, to have people say nice things about us, and if we think we have done something pretty good, we like to hear someone say so.

So the Congress said the answer is to honor publicly the best men in the trades of the building industry. The architects said "Good; when we draw fine buildings, we want to get fine workmanship." All good builders said: "It's our job to build good buildings; good workmen are what we are looking for." And the owners—well, the value of a building just depends on whether the work is the kind that will need repairs in a year or two or whether it will be good for years to come. . . .

Then, too, most owners appreciate that there is a real social significance in publicly recognizing merit, and so it is no wonder that when the great institutions and organizations of New York have put up buildings, such men as Nicholas Murray Butler, Al Smith, John D. Rockefeller, Jr., and Frederic W. Ecker have been glad to tell the men who helped build their buildings what they thought of good workmanship and to shake the hands and look into the eyes of a fine lot of fellows. And there have been more than three thousand of them so honored.

And so the New York Building Congress believes it is worth while to say to the good craftsman, "You did a good job."—Bulletin Michigan Society of Architects.

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ARCHITECT

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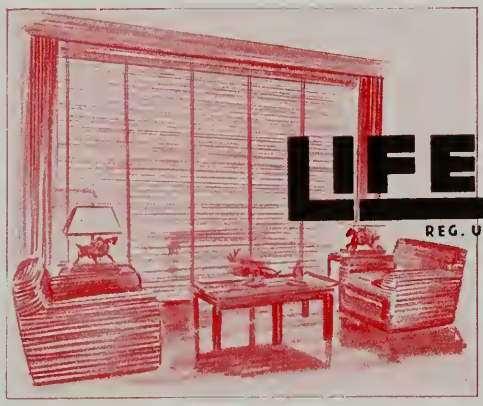
NOVEMBER, 1940

CHITECTURAL REGIONS — DO THEY EXIST?



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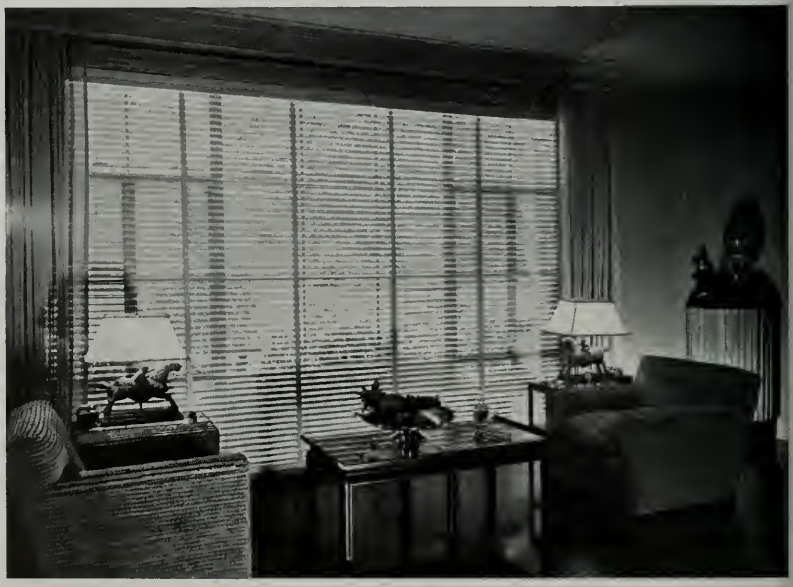

RUNNING FIRE

By MARK DANIELS

• *INHIBITIONS*

Old General Be———ls in Washington, some years ago, told me that the vigorous health of his eighth wife materially inhibited his matrimonial activities. G. K. Chesterton, God rest his soul, once told me that a pair of very thick eye glasses, slightly aggravated by 25 stone avoirdupois, constituted an inhibition against a mad desire to skip and dance. My aged uncle said that the latter 90 years of his life had placed an appreciably inhibiting influence over all his pastimes except sleep, and that continued stories on the radio now were inhibiting that. We all have inhibitions, whether we know it or not.

The publisher and editor must temper the wind of printed comment to the shorn lamb of advertising, if he wants to continue publishing and editing. The struggling artist may have to give up painting what he sees and turn to painting what the people want to see, or go hungry. I would like, at times, to rear back in my traces and write what I think about politics, laws, mayhem, history, hock-shops and halitosis, but the impropriety of bringing out the finer points of such subjects in an architectural journal materially inhibits my literary ambitions.

These are all bad enough, but the Architect—well, there are some who have come to the conclusion that the whole profession is one big inhibition.

• *SINCERITY*

Last month I set forth my own opinion that good taste was a fundamental requirement of good architecture, regardless of periods or styles. There is another—**Sincerity.**

Sincerity in any art is more elusive of definition than good taste. It is essential, however, in all the works of man that aspire to endurance and high regard, especially those works that fall in the class of self expression. And what is architecture but a medium of expression? In oratory, sincerity will carry conviction where all the skill and pyrotechnics at the command of a speaker may fail. In music, this is equally true, though here it is more difficult to grasp. In painting, writing, singing, sincerity offsets a world of technical faults. In Vienna I heard a lieder singer who thrilled an audience of five thousand to tears, yet he had a voice of quite mediocre quality.

In architecture the element of sincerity seems to me to be essentially necessary to beauty. We may have strong prejudices against certain styles, yet in those very styles we will find, now and then, a structure that moves us deeply. Most of the French neo-classics leave me cold, yet there are a few of Louis 16th that are lovely. In the period of Baroque, which most of us dislike, to say the least, some of the old courts such as that of the Marques de Vivot in Mallorca make you want to move right in. The stairway in the Casa Dalmases in Barcelona, the Clock Tower of the old Rathaus in Prague, the cloister of the cathedral of Ciudad-Rodrego, although Baroque in influence, possess a charm that will last forever. Where is there a mass more beautiful than the castle of La Valere in Switzerland or for that matter that of Chillon? Their beauty transcends time and style. They were sincere efforts to fit a requirement in good taste. In the crockets on some Gothic cathedrals, the columns in many Romanesque cloisters, the details of some Byzantine doorways, the artizans who brought them into being seemed to call down the blessing of God on every stroke of hammer or chisel. They were sincere.

• *THE FUNNIES*

Hiding behind a smoke screen of foreign wars and domestic politics, the publishers are again tampering with our Sunday comics. You would think that Mr. Hearst had learned his lesson. Twice in the past few years "Running Fire" has had to deal with him severely and each time he quickly resumed the practice that was demanded. The last time was when he was told, in no piddling language, that we, the people, would not stand for cutting in half the sizes of drawings on our Funny Page. And didn't he return to the original full size in two weeks? I'll say he did!

Last Sunday (as I write) there were six half pages of advertisements in our Funny. Perhaps it did not materially reduce the number of features, but some day it might. So, I warn you, Mr. Hearst, don't get funny with our Funnies. What's a war or a presidential election that it should endanger the life of the only part of the newspapers of today that we kids can read AND BELIEVE.

• *CONSCRIPTION*

I sipped my Old Fashioned and watched the O'Brien mix a green, iced drink for a faded blonde. The blonde had picked up her drink when the Little Man said: "Conscription is an evil of democracies."

I looked at him and he waved his cane at the O'Brien. "Dictatorships and monarchies," he continued, "are so formed that decree overcomes draft. Instead of distributing the burden of service throughout the general public, demands are made for certain groups of specific persons. Militarism takes on a glow of glory and respect, and even ease. The state is all and militarism is the state—in the U. S. the state is all, but we are the state and we don't want to risk our necks, so we encourage and conscript erratically.

"The Romans had a very satisfactory means of raising an army. Caesar would invade a country, confiscate its wealth and train its inhabitants to fight other countries. Genghis Kahn did the same thing with even more barbarism and more justice. Cleopatra raised armies by lowering her eyes at Anthony. Jupiter fought his own battles with thunderbolts—Neptune used the sea—Apollo used the sun—Venus used her sex—and Bacchus used his wine.

"Alexander invented the technique of conquest and the use of foreign war machines. If the dictators would omit their asceticism we would be able to forget the draft and could drink to pleasure rather than fear."

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ARCHITECT AND ENGINEER

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he house and garage above were designed by George N. prague, architect. The walls of both are painted an old-shioned barn-red, with white trim. The shingle roofs are ained. The beveled siding is "Mount Vernon" style. otice the board and batten siding on the garage.

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FRENCH PAINTINGS

San Francisco is indeed fortunate in securing for exhibition at the de Young Memorial Museum the year's foremost collection of art, consisting of 180 French paintings of the 19th and 20th centuries, including some of the most famous treasures of the Louvre and other French museums. Beginning late this month and continuing for a period of 60 days, this splendid collection of French art will be on exhibition in the Golden Gate Park museum. The exhibition, which the art critics of the Paris newspaper, Le Temps, called the most outstanding historic French show of modern times, covers the period from the French Revolution to the present day. None of the works it contains has ever been shown before in America.

Of special interest is the fact that many of the convases come from provincial French museums, like those of Rouen, Montpellier, Bordeaux, Rheims, Marseilles, Algiers and elsewhere, which contain highly important works, but which were rarely visited by foreign tourists in the days when there were such things in France.

Pictures from private collections in Paris and other cities are also included, as well as those from the Louvre, Luxembourg, Carnavalet, and other museums in the former French capital.

WRIGHT EXHIBIT

The most comprehensive exhibition of the work of Frank Lloyd Wright ever presented to the public is being held at the Museum of Modern Art in New York City. This show, covering fifty years of Wright's work—beginning with his earliest designs under Louis Sullivan and ending with designs of structures now being built—is part of an exhibition entitled, "Two Great Americans."

The other noted personage honored by the museum is David W. Griffith, whose contributions to the art of the motion picture is well known.

The Museum of Modern Art also announces that its Winter 1941 exhibition will be, "The Art of the American Indian," presenting contemporary Indian works and art against a background of tribal tradition.

GLASS MURALS

An exhibit of interest to architects, builders and decorators, featuring glass murals and stained glass, executed by Joep Nicolas, Dutch master in these arts, is attracting attention under sponsorship of Holland House, 10 Rockefeller Plaza, New York City, on Tuesday, October 29.

Stained glass maker for the Queen of the Netherlands and the Kingdom of Belgium before he left his native Roermond, Holland, last year, to become a citizen of this country, Mr. Nicolas is even more interested in glass murals. These he creates by a special process he has developed himself.

Photo of a glass mural, executed by Joep Nicolas, famous Dutch glass expert, in a technique he has developed exclusively.

They are of varying sizes and usually of subdued colors with a patina that suggests the richest of old ivory, inlaid in gold or silver. The design is painted and fired-in between two layers of specially-treated glass. Weather resistant, the murals can be either for outside or interior decoration. The only examples of the Nicolas glass murals in this country at the present time are to be found in the dining salon of the much-admired Nieuw Amsterdam, Dutch liner now tied up in New York harbor. Abroad, however, they are in many rich settings such as the royal chapel of the Abbey of Orval in Belgium.

HOLIDAY GREETINGS

The San Francisco Museum of Art, through its Women's Board, announces for public purchase, a selection of "greeting cards"—reproductions of drawings and paintings by San Francisco artists, such is "The Gardener" by Jacques Schnier; "Ferry Landing," by Herman Volz; "Mother and Child," by Diego Rivera, and "The Sleeping Feline," by Foujita. The cards may be bought in lots of ten or more with your choice of six appropriate sentiments printed thereon, making a unique and artistic Christmas or New Years greeting.

MOSAIC ART REVIVED

Mosaic, one of the principal media of early artisans, may return as a popular form of interior decoration, if experiments being conducted in New Jersey indicate that the public is responsive to this type of handicraft.

Inspired by the abundance of suitable clay deposits in the State and the possibility that a market for them might be created, the New Jersey WPA Arts and Crafts Project has set up a unit to study these clays and turn out some original work in mosaic. A favorite form of both interior and exterior decoration in ancient Antioch, officials and artisans of the project are hopeful that the medium will become popular with American designers and architects and make possible a market for the clay deposits.

Aside from the Spanish-type homes of California and Florida with their gay patios and fountains, American architects seldom use mosaic, except in simple forms. In Europe, on the other hand, it plays an important role in the decor of many handsome modern houses.

The design for a mosaic panel is first made on a small scale, in full color, then enlarged to full size. This latter is called a cartoon, on which the place for each tile is designated. The cartoon is sent to Perth Amboy, where the ceramic engineers and their asisstants cut the tiles according to the design.

Using a palette of about thirty tones and shaping the pieces as he goes along, the artisan arranges them over the cartoon, which has been placed on a heavy board. Sand is sprinkled between each segment and muslin pasted securely over the entire surface. After a two-inch layer of cement is applied, the mosaic is ready to be mounted on a wall prepared with mortar-mixtures. The infinite variations of tone in tiles necessitates artistic judgment even in following the cartoon.

PHOTO FORUM

The San Francisco Museum of Art announces a Photo Forum that is intended to stimulate interest in amateur moving picture photography. Dates have been set as follows:

November 18, 1940, 8 p.m.—"Trends in Photography." All subjects acceptable for showing.

November 25, 1940, 8 p.m.—"Developments in Color Photography." All subjects acceptable for showing.

December 2, 1940, 8 p.m.—"Form in Photography." All subjects acceptable for showing.

December 9, 1940, 8 p.m. — "Cinema Scripts." All subjects acceptable for showing.

December 16, 1940, 8 p.m.—"Your Hobby and Photography." All subjects acceptable for showing.

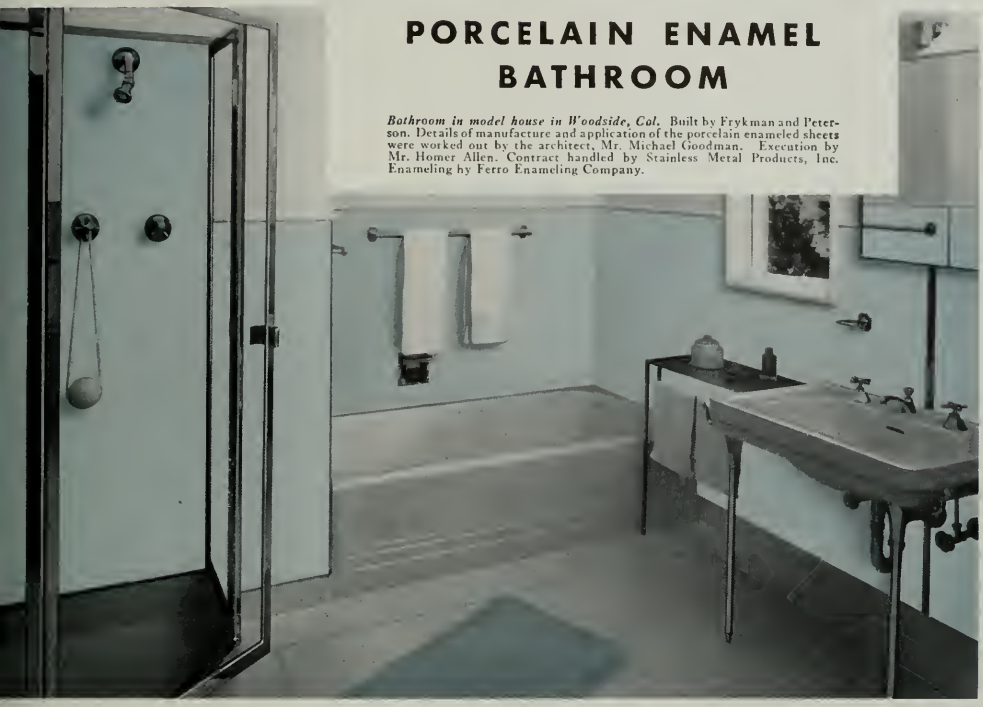
January 6, 1941, 8 p.m.—"Tricks in Photography." All subjects acceptable for showing.

January 13, 1941, 8 p.m.—"The Cinema and Craftsmanship." All subjects acceptable for showing.

January 20, 1941, 8 p.m.—"Does Your Film Tell a Story?" Final showing by invitation.

MODEL HOME FEATURES *Colorful*

PORCELAIN ENAMEL BATHROOM



Bathroom in model house in Woodside, Cal. Built by Frykman and Peterson. Details of manufacture and application of the porcelain enameled sheets were worked out by the architect, Mr. Michael Goodman. Execution by Mr. Homer Allen. Contract handled by Stainless Metal Products, Inc. Enameling by Ferro Enameling Company.

ONE of the most attractive features in a model home recently ected in Woodside, Cal., is this porain enamel bathroom. The lower ll sections and back walls of the ower are cerulean blue porcelain ameled sheets cemented to termited moisture-proof sheathing. Eight ches of floor space were saved in e shower by using porcelain enamel the back walls and floor, which s a non-slip finish.

Porcelain enamel is the ideal, reaably priced material for bathroom lls. It assures a permanent, beautiful finish that requires no more than wiping with a damp cloth to keep clean. Because a minimum of joints are required and the material itself is flexible, porcelain enamel walls are not affected by settling, shifting or moving of the surrounding structure. A one-piece shower recepter of porcelain enamel will not crack or leak. And construction costs are low—it is easily and speedily erected.

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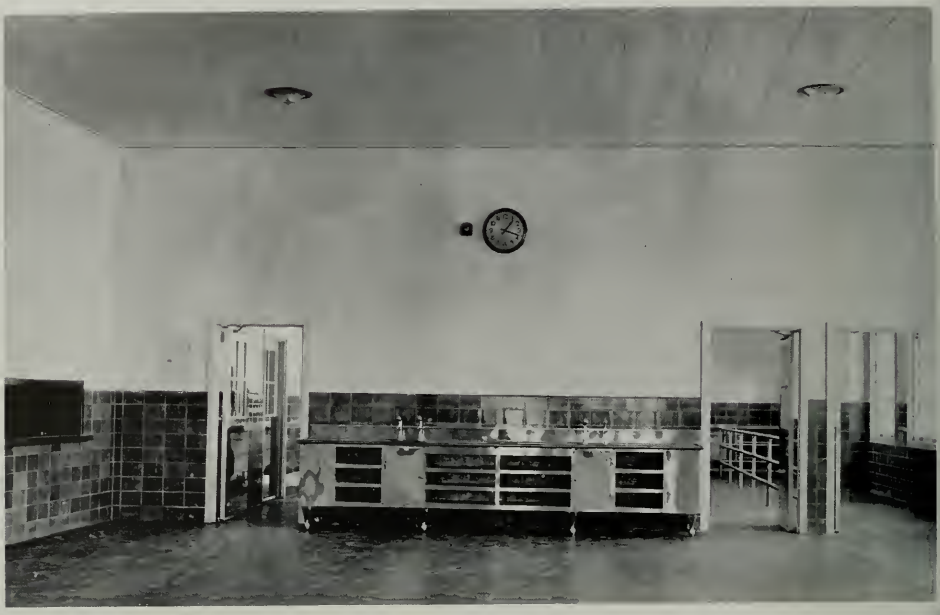

Master Kraftile 6 x 9's help make attractive the dining-room, serving-room, and teachers' dining-room of the Cafeteria Building at Horace Mann Junior High School, San Francisco. The larger size of tile, set horizontally, is highly effective. Color is Kraftile's "El Dorado Rust."
Architects: Bakewell and Weihe and Bureau of Architecture, Department of Public Works, San Francisco.
Tile Contractor: Donlon Tile Company.

Auditorium Corridor, Marina Junior High School, San Francisco. Glazed wall treatment the same as in old building. Wainscoting is of Kraftile Ceramic Facing of Gray Granite Glaze, the baseboard being black.

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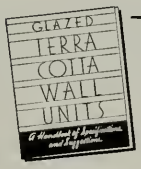

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LION VIEWING-FOYER

Above: Public viewing-foyer, lion cages, new Fleishhacker Zoo, San Francisco. Lewis Hobart, Architect. Right: Exterior scene showing lions in new quarters.

Leo the lion will never tread the floor of the viewing-foyer at the lion cages of San Francisco's new Fleishhacker Zoo, but countless thousands of pairs of feet will shuffle across this lobby in years to come. That's why Architect Lewis Hobart chose N. Clark & Sons' Alameda Quarry Tile. The biggest size made—12¼"x12¼"—it has high durability and a minimum of joints makes it easier to keep clean.

Made in a number of sizes, Alameda Quarry Tile is used in lobbies, schools, hotel kitchens, milk processing plants and wherever the traffic is severe.

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That is the *Johnson* thought behind the selection of exactly the proper type of "humidostat" for each individual humidity control installation. In solving automatic temperature and air conditioning control problems, always in the minds of *Johnson* engineers is the indisputable fact that even the most efficient devices are valuable only when they function perfectly as part of the whole . . . Almost every installation differs as to the relative humidity to be maintained and the dry-bulb temperature with which that humidity is associated. Various materials, which respond dependably to changes in the moisture content of the surrounding air, are affected differently under each set of conditions. That is why *Johnson* offers "humidostats" with any one of several types of elements, such as animal membrane, human hair, wood in various forms, and other substances . . . Ask for bulletins describing *Johnson* room and insertion type "humidostats." There is no obligation. A post card will bring them.

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The merciless blare of radio is certain to bring about a salutary revolution in the family home of the not distant future. It will consist in part of a series of soundproof, windowless, air-conditioned, cell-like rooms, one for each member of the household, each room containing a radio. To his or her own particular torture chamber will retire any person on feeling the urge to indulge in self-immolation on one, two or more aerial sound racks, called programs, that are unendurable to others under the same roof. There being no windows to be opened, the neighborhood at large will be protected from the sufferings now so commonly inflicted upon large groups of writhing innocents whenever the weather is pleasant.

It may be that in some future building code this essential reform will receive attention. Regardless of that indefinite possibility, humanitarian considerations and the law of self-preservation should furnish quite enough motive power to get that life-saving and sanity-preserving movement under way. —Charles H. Dennis, in Illinois Society of Architects Bulletin.

MILLION DOLLAR FEE

According to Al Chase, writing in the Chicago Tribune of September 21, Frank Lloyd Wright has designed a $10,000,000 group of buildings for Washington, D. C., whose site is a 10-acre tract known as Temple Heights on Connecticut Avenue. The project includes a super-hotel, a large cinema, several shops and office buildings. The purpose announced is to give Washington a group of structures similar to Radio City, New York, the units to be "extremely modern in design," according to Chase.

Chase says that Wright doesn't work for less than 10 per cent of the cost and since this complex of buildings is to cost $10,000,000, Wright's fee will be $1,000,000.

ART IN ACTION BY WOMEN ARTISTS

During the Women Artists' exhibition at the San Francisco Museum of Art a continuous program of "Art in Action" will be given every afternoon and evening except Monday evenings and Sundays. Organized by Ida Day Degen, the techniques of weaving, pottery making, wood-carving, jewelry-making, clay-modelling, painting in tempera, fresco and oil, drawing, mosaic-making, etching, silk-screen printing and flower arrangement, will be demonstrated by women artists skilled in these arts.

ANTIQUES

Wanted—A place to show her wares by an antique lady with a Spanish chest and other odd things.—Cold Springs, Georgia, Times.

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Here's a big, new radio program devoted to the betterment of the American home, store, and factory—selling the idea that whether you build or remodel, you can do it better by Designing for Happiness with Glass. Here is a program that fosters that deep-rooted desire of most Americans to own a home of their own. It is obviously a program that will help the entire building industry.

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Perfection of Detail

Elsewhere in this issue, this striking residence of Mr. and Mrs. Ingle Barr, located in Beverly Hills, is pictured and described. For the Barr house, architect J. E. Dolena specified reliable, gas-fired PAYNE Winter Air Conditioning. ¶ Pioneering innovations in house heating equipment for more than a quarter-century, PAYNE manufactures vented furnaces for any size residence—cottage to mansion. Specify PAYNEHEAT in your next job.

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The Carteret, N. J., High School saved $247.94 in water bills the first three months Sloan Valves were installed. The Normandie Apartments in Seattle replaced other flush valves with Sloan in 1931. Since that time the former $95 a month water bill has averaged $30. 26 Sloan Valves in the Belleville High School (Ill.) cut water bills $90 a month.

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Sloan Flush Valves end forever excessive maintenance bills, for they are as nearly trouble-proof as a mechanical device can be made. Look at the record: The Stevens Hotel (Chicago) averaged 1½c per valve per year for the first seven years; the State Hospital at Warm Springs (Mont.) spent $2 on 100 Sloan Valves in 8 years; at 35 E. Wacker Drive (Chicago) only one valve was touched in 8 years.

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Sloan Catalog 40, just coming off the press, is filled with useful flush valve information that will help you choose the right valve for any installation conditions—valves hand, seat, pedal or floor button operated, for fresh or salt water. Use the coupon for quick action.

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Sloan Flush Valves are sold through plumbing supply houses everywhere. There are Sloan factory representatives in all principal cities.

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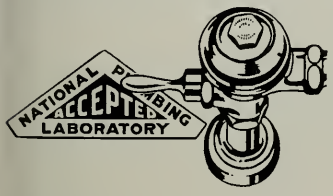

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New Unit, Berkeley High School
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Contractor: Engineers, Ltd.
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Using Golden Gate Portland Cement, Empire Steel Studs, Empire Hardwall Plaster, Milcor Metal Lath and Corner Beads

Interior view, showing hollow partition construction

Functional design, proven methods and PACIFIC Materials all combine to make this new Berkeley High School unit a masterpiece of sound, economical construction. Among the brand names found on the job were *Golden Gate, Empire, Milcor*—all products of Pacific Portland Cement Company. On your next job make certain — specify PACIFIC Materials — one source, one responsibility.

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FOR SOUND CONSTRUCTION

Physicians Approve Roll-Away Screens

Three new medico-dental buildings at Santa Rosa, designed by C. A. Caulkins, Jr., are equipped with Roll-Away bronze wire screens with flat metal frames. Besides the Hamlin Building (above) and the Marsh and Thurlow buildings, **Roll-Aways** were specified by the same architect on the Albertson, Fuller and Smalley residences in Santa Rosa.

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C. A. Caulkins, Architect.

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on many of the buildings designed by C.A.Caulkins, Jr., and illustrated in this issue, furnished by

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CHRISTMAS SEALS

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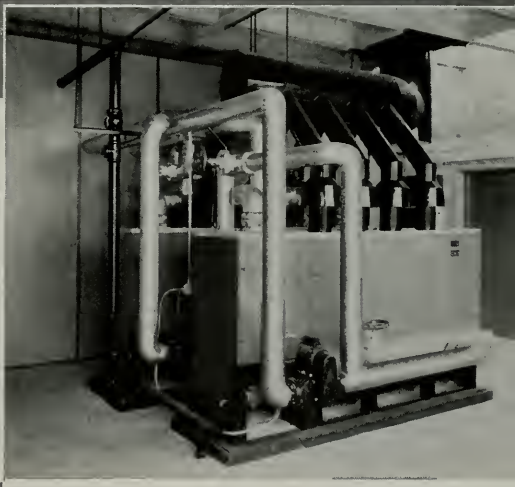
Gas heating plant IS ON THE ROOF!

STANISLAUS COUNTY OFFICE BUILDING, MODESTO, CALIF.

ONLY to the uninitiated would this job seem topsy-turvy. Architects and engineers will recognize consistent advanced design: A 2,000,000-B.t.u., automatic gas heating plant, located "topside", delivering instant, even warmth... restful wall areas balanced against continuous windows... simplicity and strength throughout. ☆ The more modern your design, the more appropriate an *all-gas* installation. Your Gas Company invites free consultation.

Architect, Russell Guerne de Lappe; *Structural Engineer*, H. J. Brunnier; *Mechanical Engineering*, A. H. Memmler; *General Contractor*, Dinwiddie Construction Co.; *Heating Contractor*, Air Conditioning of the Pacific.



LET GAS THE MODERN FUEL DO THE 4 BIG JOBS

HOUSE HEATING ★ WATER HEATING ★ COOKING ★ REFRIGERATION

Benjamin Morton Purdy, Lanscape Architect

WEST GARDEN VIEW, RESIDENCE OF MR. AND MRS. INGLE BARR, BEVERLY HILLS, CALIFORNIA

J. E. DOLENA, ARCHITECT

APPROACH FROM STREET, RESIDENCE OF MR. AND MRS. INGLE BARR, BEVERLY HILLS, CALIFORNIA

J. E. Dolena, Architect

The exterior walls are reinforced brick veneer painted an off-white. The first floor has steel junior beams.

AN ENGLISH HOME IN BEVERLY HILLS

THE modernized English home of Mr. and Mrs. Ingle Barr, located in the exclusive Beverly Hills residential district in Southern California, is the result of careful consideration of the site and individual life of the owners.

The grounds having a rugged rolling contour, some reshaping of the property was necessary before building could begin. Consequently the area occupied by the house was leveled to a uniform grade. From this area the rest of the property was preserved in its natural form.

Location of the house and its shape were gracefully fitted to the site, and the landscaping was systematically coordinated with pleasing results.

The house is of the conventional type with wood floors, walls and partitions. The outside walls are sheathed and faced with reinforced brick veneer. The only variation from usual methods was in the construction of the first floor where steel beams serve as joists. A two-inch tongue and grooved sub-floor is laid over the steel.

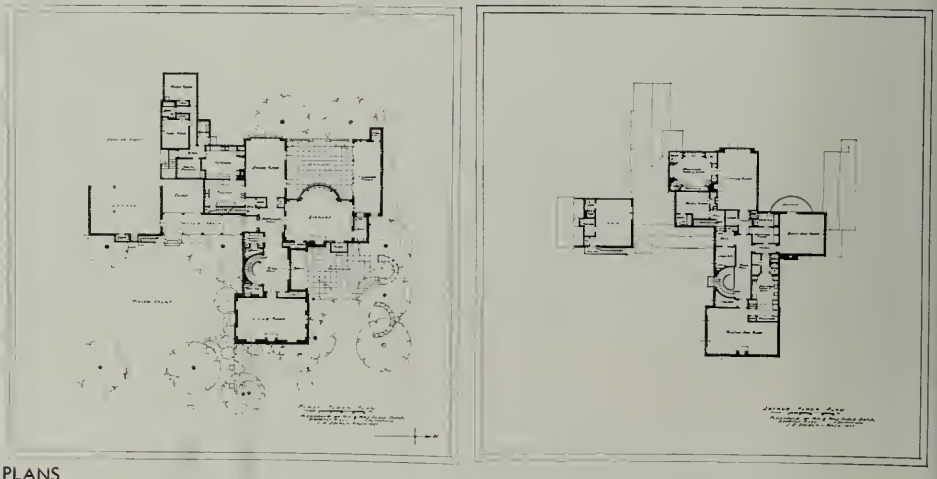
The exterior color scheme blends nicely with the surroundings, the brick facing and trim being an off-white tone, the brick brush coated and the trim painted to match.

The roof is covered with heavy butt wood shingles, which have been left in their natural color to weather. All exterior trim is white

(Turn to Page 46)

EAST GARDEN VIEW, RESIDENCE OF MR. AND MRS. INGLE BARR, BEVERLY HILLS, CALIFORNIA

J. E. Dolena, Architect



PLANS

LIVING ROOM, RESIDENCE OF MR. AND MRS. INGLE BARR, BEVERLY HILLS, CALIFORNIA

LIBRARY, RESIDENCE OF MR. AND MRS. INGLE BARR, BEVERLY HILLS, CALIFORNIA
J. E. Dolena, Architect
The trim and paneling is black walnut, bleached

ENTRANCE DETAIL, MEDICO-DENTAL BUILDING FOR DR. R. E. HAMLIN, SANTA ROSA, CALIFORNIA

C. A. Caulkins, Jr., A.I.A., Architect

The panel over the entrance is dark green Carrara glass in which is etched the insignia of the medical profession. Glazing is Lustrablu throughout.

William Rapp, General Contractor

MEDICO-DENTAL BUILDING FOR DR. R. E. HAMLIN, SANTA ROSA, CALIFORNIA
C. A. Caulkins, Jr., A.I.A., Architect

ARCHITECTURAL REGIONS
DO THEY EXIST?

By IRVING F. MORROW, A.I.A.

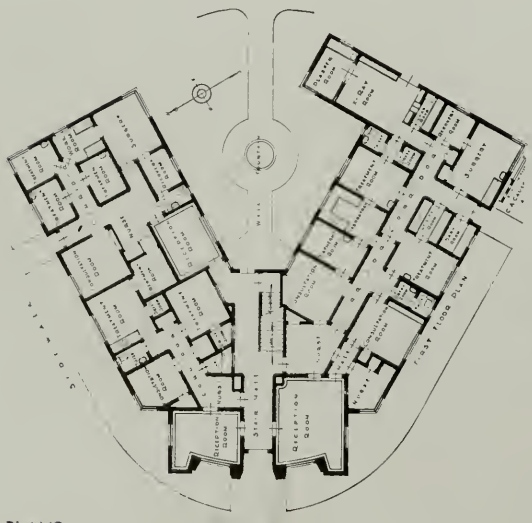
THE observant architectural pilgrim in Europe—I have in mind, of course, the days when travelling was still a possible occupation in the now unhappy countries of the Old World —will not have failed to note that, in the past, individual and highly developed styles of building often arose, flourished and declined entirely within the confines of surprisingly restricted areas. In fact, we are prone to regard regional differentiation as a desideratum in communities beyond the metropolitan centers. We do not, however, think in terms which dramatize the smallness of many clearly defined architectural regions. But look at it this way: Every tourist has "done" Touraine and recognized its architectural uniqueness. As the crow flies, the distance between Blois, which is fairly central to this compact region, and Paris is about equal to that between San Francisco and Marysville or that between Los Angeles

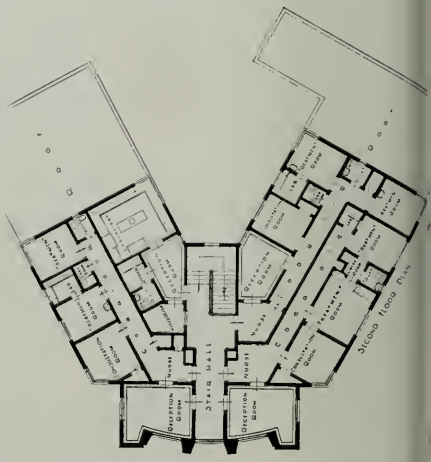
PLANS

R. S. Knight, General Contractor

PROFESSIONAL BUILDING FOR DR. A. A. THURLOW AND DR. JOHN THURLOW, SANTA ROSA, CALIFORNIA

C. A. Caulkins, Jr., A.I.A., Architect





PLANS

MEDICO-DENTAL BUILDING FOR DR. CHESTER MARSH, SEBASTOPOL, CALIFORNIA
C. A. Caulkins, Jr., A.I.A., Architect

and Bakersfield; some ten miles greater than that between San Francisco and Salinas or that between San Jose and Santa Rosa. Still considering the practice of that hypothetical crow, the distance between classical Rome and romantic Florence approximates that between San Francisco and Madera. A comparison even more striking is possible. Probably two architectures can not be found which are more distinct than those which huddle into very small areas between Pisa and Florence respectively. The distance between these two centers equals that between San Francisco and either Napa, Antioch or San Jose; that between Fresno and Visalia; or that between Santa Rosa and San Rafael.

PLAN

Small private professional buildings for physicians and dentists, individually or in groups, constitute a conspicuous phenomenon throughout the country.

Now it would sound whimsical, to say the least, to suggest that the victim of airplane trouble might identify whether his forced landing had been made in Visalia, Fresno, San Rafael or Santa Rosa, merely by the style of architecture into which he had fallen. By that criterion there might be occasions when the event would be judged to have occurred in Pisa or Florence. Nor do I wish to re-enunciate that venerable bromidiom about the world's cer-

William Rapp, General Contractor

MEDICO-DENTAL BUILDING FOR BARNETT BROS., SANTA ROSA, CALIFORNIA
C. A. Caulkins, Jr., A.I.A., Architect

PLANS

tainly getting smaller. But none the less, what happens when you begin to seek our own architectural regions?

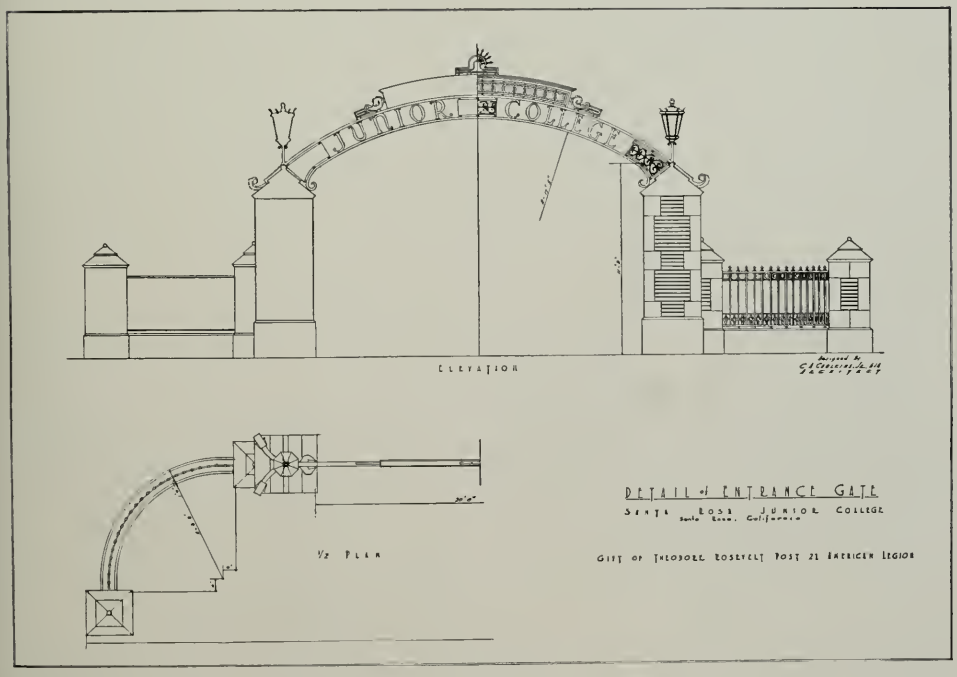
In the earliest days of isolated colonies they existed. New England, Pennsylvania, Virginia, New Orleans, California, were all places where you could identify your whereabouts by the architectural pattern you saw. With the coalescing of separated communities into a continuous continental occupation, architectural regions persisted only as historical survivals. The office building erected in Savannah, Oklahoma City or Seattle differed from that that erected in New York only in size and expensiveness of finish. The new house in Dallas, Omaha or Eureka bore a similar identity to that in Roland Park or Long Island. Except for a handful of communities which methodically whipped up the spontaniety of lost or passing youth, the nation became one region.

Then, on top of this already prepared national unity, comes the even broader integration of the well-nigh world-wide architectural movement of the last few decades. A name becomes a practical necessity, however much we may wish to avoid it. Shall it be "modern," or "the international style," or have you a better one? I am willing to accept anything but "modernistic." But whatever you call it, and however you like it, here it is; and the "region" which had expanded to embrace San Diego and Portland, Maine, now extends from Hongkong to Buenos Aires, going **ad lib.** in either direction.

AMERICAN LEGION GATE, SANTA ROSA JUNIOR COLLEGE, SANTA ROSA, CALIFORNIA

Detail Below

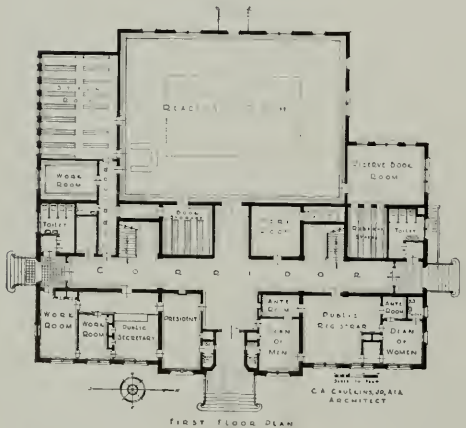
Caulkins & Herbert, Architects



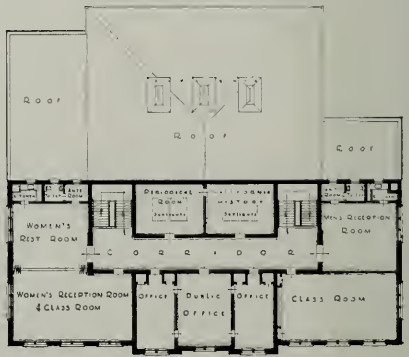
LIBRARY AND ADMINISTRATION BUILDING, SANTA ROSA JUNIOR COLLEGE

C. A. Caulkins, Jr., A.I.A., Architect

The buildings of the Santa Rosa Junior College have been designed in Tudor Gothic so that they may conform in style to a building already existing when the present architect entered upon his work.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

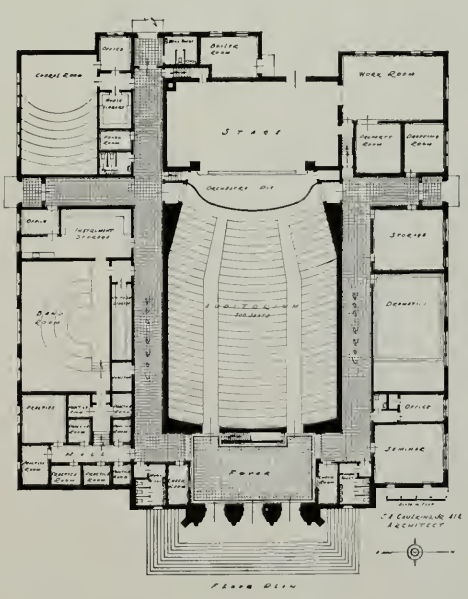
PLANS

AUDITORIUM, MUSIC AND DRAMATICS BUILDING, SANTA ROSA JUNIOR COLLEGE
C. A. Caulkins, Jr., A.I.A., Architect

CONSTRUCTION OUTLINE

SANTA ROSA JUNIOR COLLEGE
Auditorium, Music and Dramatics Building

FOUNDATION:	Reinforced concrete. Waterproofing.
STRUCTURE:	Reinforced concrete exterior and most interior walls. Plaster walls.
CAST CEMENT WORK:	By Fred Ferrero & Son, Alameda, Calif.
ROOF:	Flat, interlocking, hard burned tile by Gladding, McBean Co.
INSULATION AND ACCOUSTICAL TREATMENT:	Plaster on Absorbex Type F for sound deadened partitions. Absorbex Type A and Acousti Celotex for acoustical treatment.
WINDOWS:	Reversible awning type. Universal wood sash.
FLOOR COVERINGS	Asphalt tile and rubber tile.
WOOD TRIM:	Doors oak veneered.
PLUMBING:	Fixtures by Crane Co.
BRICKWORK:	All exterior walls veneered with selected wire cut, pressed, standard face brick by Cannon Co.
HEATING:	Gas fired, vacuum steam heat.



PLAN

MUSEUM AND INDUSTRIAL ARTS BUILDING, SANTA ROSA JUNIOR COLLEGE
C. A. Caulkins, Jr., A.I.A., Architect

Even a naturally ornate style can shed much of its stylistic trappings with advantage when plain utility becomes more important than impressing the beholder. All the Junior College buildings are faced with red brick and cast cement moldings.

I am moved to the above reflections—which I make with neither implied criticism, resentment or regret, but only as an objective statement of the case—by perusal of the photographs of buildings by Mr. C. A. Caulkins, Jr. which constitute the major item of this issue. If, I asked myself, through the instrumentality of either a careless printer or a whimsical editor, credit lines were printed assigning San Jose or Fresno as the location instead of Santa Rosa, what Architect and Engineer reader, other than Mr. Caulkins and his clients, would suspect foul play? (I might have gone on to query, who but Mr. Caulkins, his clients and the proofreader will read this anyway? But at the moment I was concerned with the photographs rather than with theoretical questions of architectural journalism which in any case can not be discussed here.) The point is that at any time up to the nineteenth century such juggling of localities as I have suggested would have been as obviously erroneous to the general public as to the specially informed. Mr. Caulkins employs an idiom which has no connection historically, symbolically or sentimentally with Santa Rosa, but which is current almost literally wherever building is done in the world today. And the same thing is true, of course, of his confreres in every other locality. To such a situation there are both advantages and disadvantages which are arguable; and like most arguments, would probably be settled in the end on the basis of each individual's temperamental proclivities. Disappearance of the locally picturesque (local color) may be a romantic loss; but its replacement by the universally valid has social implications which in the long run are likely to be of far-reaching importance.

Mr. Caulkins has acquired considerable fa-

COMMERCIAL BUILDING, SANTA ROSA JUNIOR COLLEGE

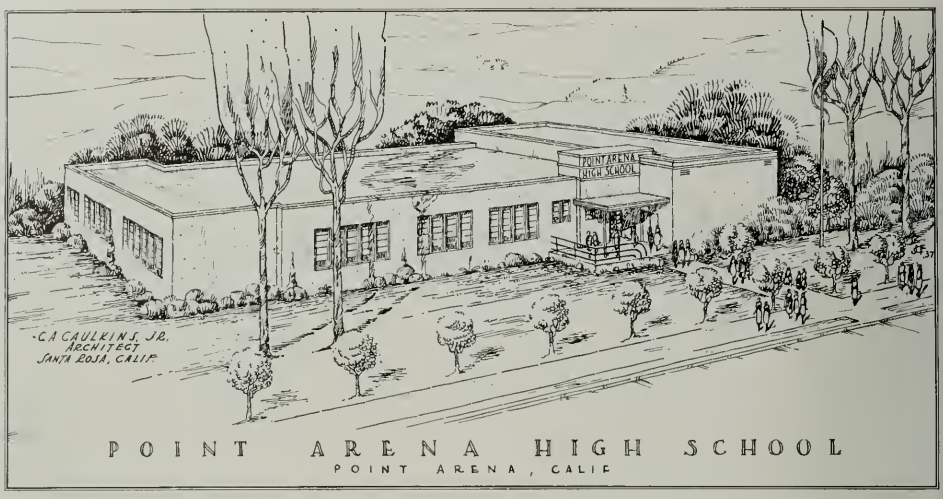
C. A. Caulkins, Jr., A.I.A., Architect

The Santa Rosa Junior College campus is located just north of the City of Santa Rosa, Sonoma County, California. The natural beauty of the huge oak trees has been preserved by locating roads, paths and buildings to blend with the surroundings.

miliarity with the vocabulary of this modern architectural movement, which he employs freely and for frankly decorative ends. He does not, however, probe for that basic identity of structure and effect which is the motive force of creative modernism, and out of which his chosen vocabulary has historically emerged. There is a tendency to be not so much modern as "moderne."

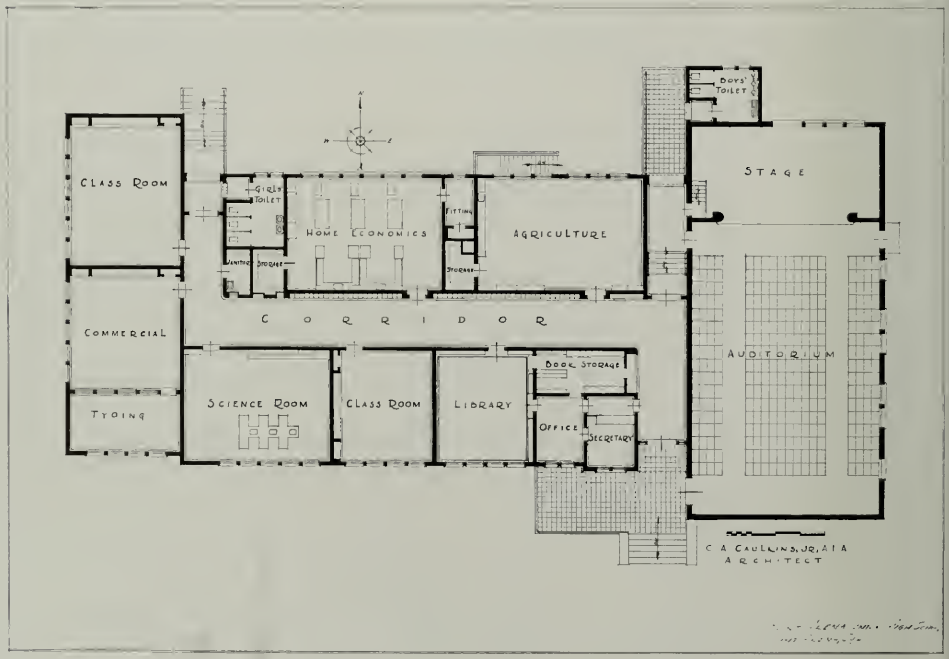
The Santa Rosa Junior College is a conspicuous exception in style. The consensus of the other buildings makes it apparent that the style was not the architect's choice; and in fact it appears that its Tudor Gothic was employed in deference to a previously existing building of the group. It is a question in my mind how far such antecedent conditions need be considered as obligations in creative work. When twelfth century builders came to complete the towers of a Romanesque church, or Francis I builders had to add an apse to a Gothic nave, no question of archaeological consistency entered their heads. Remember the cathedral of Chartres. They unhesitatingly did the then current thing, not only in the various units of a group, but in successive parts of one and the same building. The result is an emotional conviction which transcends academic correctness. It occurs to nobody today that their course so much as requires justification.

Some of the smaller houses approach that lack of stylistic preoccupation and frank acceptance of requirements which are fundamental to the truest modernism. After all, there is nothing so engaging as naturalness.



POINT ARENA HIGH SCHOOL, POINT ARENA, CALIFORNIA

C. A. Caulkins, Jr., A.I.A., Architect

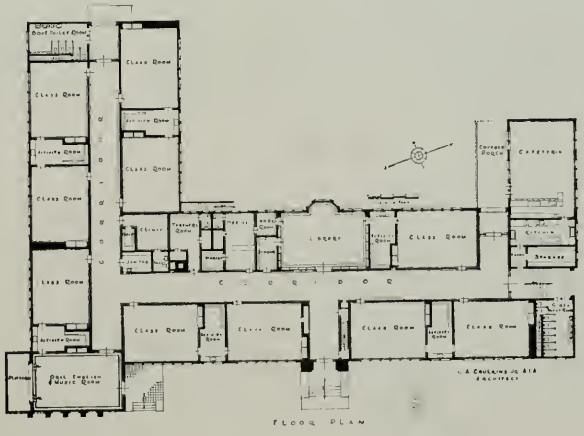


PLAN

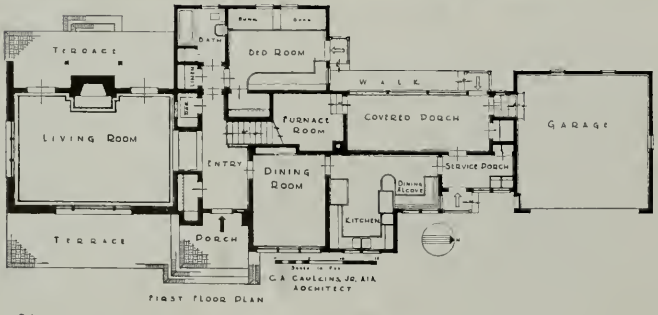
SEBASTOPOL ELEMENTARY SCHOOL, SEBASTOPOL, CALIFORNIA

Caulkins & Herbert, Architects

A good working school plan. Circulation might have been improved, however, by allowing the east-west corridor to reach the exterior directly adjoining the oral English and music room.


Class Room
Class Room
Class Room

HOUSE FOR MR. AND MRS. RALPH HOGAN, UKIAH, CALIFORNIA
BELOW—TWO VIEWS OF LIVING ROOM AND PLANS

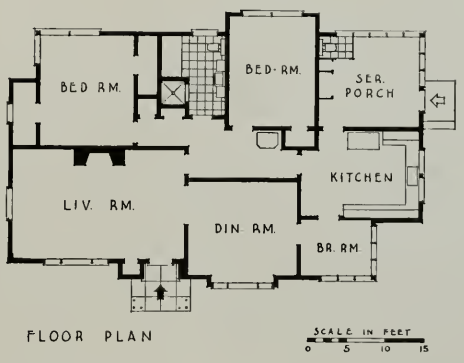


HOUSE FOR MR. AND MRS. J. C. BLACKMAN, SANTA ROSA, CALIFORNIA
C. A. Caulkins, Jr., A.I.A., Architect

HOUSE FOR MR. AND MRS. CLARK M. AVERY, SANTA ROSA, CALIFORNIA
C. A. Caulkins, Jr., A.I.A., Architect

AT RIGHT—PLAN OF BLACKMAN HOUSE

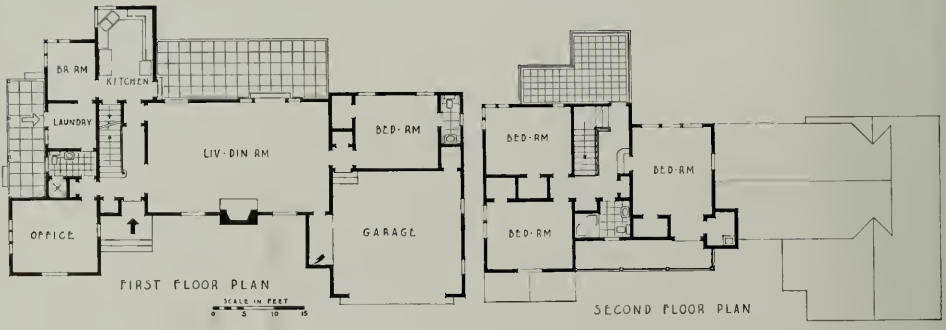
The simplicity and frankness of the two houses pictured on this page are in the best tradition of popular American domestic architecture.



HOUSE FOR MR. AND MRS. LEONARD A. TALBOT, SANTA ROSA, CALIFORNIA

C. A. Caulkins, Jr., A.I.A., Architect

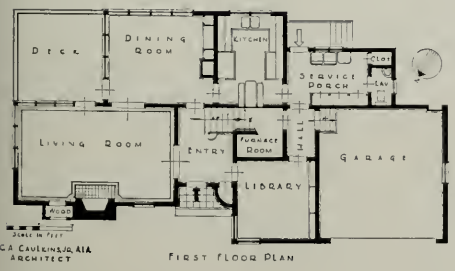
The tradition of California-Spanish design still resists the incursions of the "International Style." But the Spaniards would have been held to a more structural alignment of the second story offsets.



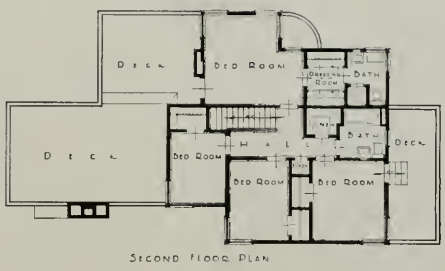
PLANS

HOUSE FOR DR. AND MRS. R. B. SMALLEY, WILLITS, CALIFORNIA

An admirable exemplification of the thesis of the accompanying article. Only relatively few years ago a resident of a town like Willits would not have dared to have considered a house of this character.



First floor plan



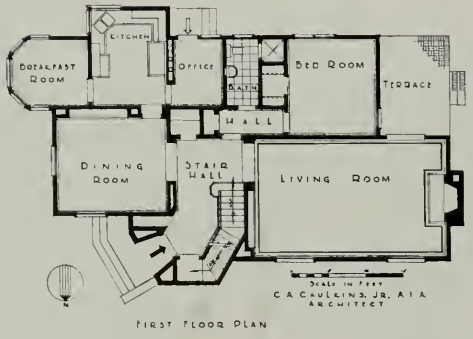
Second floor plan

PLANS

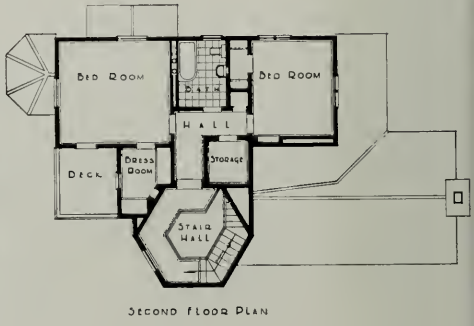
HOUSE FOR MR. AND MRS. FLOYD TROMBETTA, SANTA ROSA, CALIFORNIA

C. A. Caulkins, Jr., A.I.A., Architect

The introduction of other than rectangular forms into small rectangular plans is difficult and apt to result in sacrificing much greater space than has occurred here.



First Floor Plan



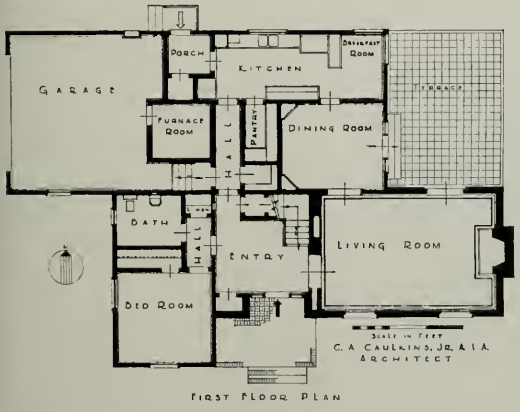
Second Floor Plan

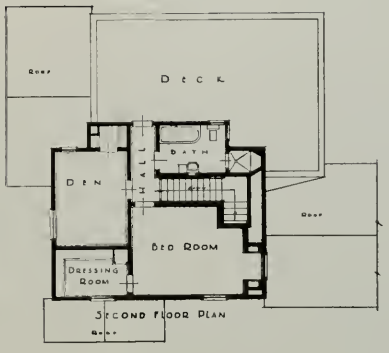
PLANS

HOUSE FOR MR. AND MRS. E. L. ALBERTSON, UKIAH, CALIFORNIA

C. A. Caulkins, Jr., A.I.A., Architect

An agreeable arrangement for the enjoyment of out-of-doors, well sheltered from the public street.





PLANS

Lindgren & Swinerton, Inc., Builders

COMMERCE AND SCIENCE UNIT, BERKELEY HIGH SCHOOL, BERKELEY, CALIFORNIA

Henry H. Gutterson, Architect; Will G. Corlett, Architect and Engineer

Completion of this building marks the consummation of the latest building program of the Berkeley Board of Education. The new structure occupies the site of one of the older high school buildings and adds materially to the appearance of Berkeley's close-by Civic Center. Imposing figures in cast cement add to the beauty of the exterior appearance of the new unit. The above is the first photograph to be shown since completion of the school. Later on additional pictures will be shown in this magazine.

LANDSCAPE ARCHITECTS AND NEW FEDERAL WORK

ANTICIPATING a demand for the services of landscape architects in connection with the Government's preparedness program, the American Association of Landscape Architects, through its board of trustees, its president, A. D. Taylor, and its secretary, Markley Stevenson, has issued the following statement:

"The American Society of Landscape Architects was founded in 1899. It is the only national organization representing the profession of landscape architecture in the national defense program. There are eleven chapters distributed in five regional districts. Members of this profession are located in all of the important cities of the United States.

"The education and training of the landscape architects qualify him to perform a specialized service in the design and supervision of any defense projects concerned with land use. The landscape architect's major function is the selection and planning of sites. Detailed items of professional technical service most frequently involved in his work are the following: Inter-relation of structural and topographic elements; grading, drainage; roads; walks; recreation facilities; surface irrigation; and planting.

"The landscape architect can also provide a valuable service in the preparation of topographic maps, map interpretation, and in camouflage.

"The procedure followed by the landscape architect generally consists of:

- Consulting service in analysis of planning problems (usually in collaboration with engineers and architects);
- Selection of sites;
- Preliminary design of sites (including preliminary specifications and estimates of costs);
- Preparation of final designs, working drawings, and specifications;
- Final estimates of quantities and of costs;
- Negotiation for landscape construction contracts;
- Supervision of landscape construction including: Grading, drainage, roads, walks, recreation areas, lawns, and planting;
- Certification of expenditures;
- Administration of general landscape construction.

TYPICAL PROBLEMS

"The following are typical problems in which the technical skill of the landscape architect, working in collaboration with the architect, engineer, or planner, is essential to the proper and efficient development of a project:

- Reconnoissance, analysis, and advanced planning of projects;
- Selection and planning of sites, with adaptation of structures to land, for:
  - Communities, such as different types of housing developments;
  - Building groups, such as industrial developments, camps, and cantonments;
  - Individual buildings, such as military and naval structures, hospitals, and schools;
  - Airports and landing fields;
  - Highway development;
- Reclamation projects: sites for towns;
- Topographic maps.

"The American Society of Landscape Architects has made a comprehensive survey of the profession throughout the United States, including non-members of the Society. The survey covers information as to experience, availability of service, record of office work pertinent to national defense projects, office personnel, and geographic distribution. The result of this survey is on file at the secretary's office, 9 Park Street, Boston, Mass., and will be sent upon request.

"This survey contains definite information as to landscape architects now available:

"To accept contracts for professional services in design and supervision of construction of national defense projects and other government projects; and

"To accept salaried position with landscape offices and government agencies for design and supervision."

THREE ROOMS IN ONE

ONE

TWO

THREE

DESIGNED BY PAUL BRY and JO KIM

FOUR

FIVE

(1) Living-room—Dining-room—Bedroom are here combined in three pieces of furniture for a bachelor apartment. The group is shown for ordinary use as living-room. Table serves as writing-desk. Couch provides comfortable seating for several people.

(2) At meal-time the table is opened like a piano and dishes are revealed on a movable table underneath, ready for serving.

(3) Three chairs which fit under the table are now pulled out and the table swung out, away from its separate top, which is attached to the wall and now serves as a buffet.

(4) With the table and chairs in place, the hinged top, which is attached to wall, is lowered to serve as sideboard. After the meal the table is pushed back.

(5) When the guests are gone, dishes are removed from under the table "piano"-cover and the couch is converted into a bed. Bedding is stored in head of couch.

ARCHITECTS READY TO AID NATIONAL DEFENSE PLANS

ARCHITECTURAL service in connection with national defense should be distributed as evenly as possible throughout the profession, according to Gordon B. Kaufmann of Los Angeles, Director of the American Institute of Architects for the Sierra Nevada District.

Mr. Kaufmann warns that concentration of defense activity in a comparatively small number of firms will result in a sharp slump when emergency commissions finally cease.

"It is hoped that the work may be spread, within reasonable limits, so that each architect may be able to give his services without being called upon to increase his organization beyond a normally expected amount," Mr. Kaufmann says. "In this way the profession as a whole can function efficiently without danger of facing an undue slump when defense construction comes to an end.

"If, however, defense tasks are concentrated in a small number of offices, the result will be that these offices will boom while other offices will be in serious need of work at this time. Some offices will bid for personnel at the expense of other offices and become over-extended.

"When architectural and construction activity returns to normal, these offices will undergo the unhappy experience of undue shrinkage just at a period when this will be difficult to achieve. Therefore, in the interest of the profession, as well as of the defense program itself, a wise distribution will be advisable."

Architects in the Sierra Nevada region, embracing California, Nevada, Arizona, Hawaii, and all insular possessions in the Pacific, have assumed leadership in vital spheres of defense, and are already engaged on many projects, Mr. Kaufman reports.

"Plant construction for the manufacture of airplanes is an important field for architectural service in Southern California. Orders by the Army for $500,000,000 worth of airplanes to be manufactured in this general area call for huge plant expansion which has to be quickly and efficiently executed. Generally speaking, this expansion is in the hands of architects, who are relied upon to furnish not only the important technical services but the administrative skill required by a building program of this kind.

"Plants allied to the aviation industry are also expanding, and this expansion, too, in many instances, is in the hands of architects, who, together with engineers and contractors, are performing valuable services, giving technical advice to the owner, and seeing to it that it is carried out.

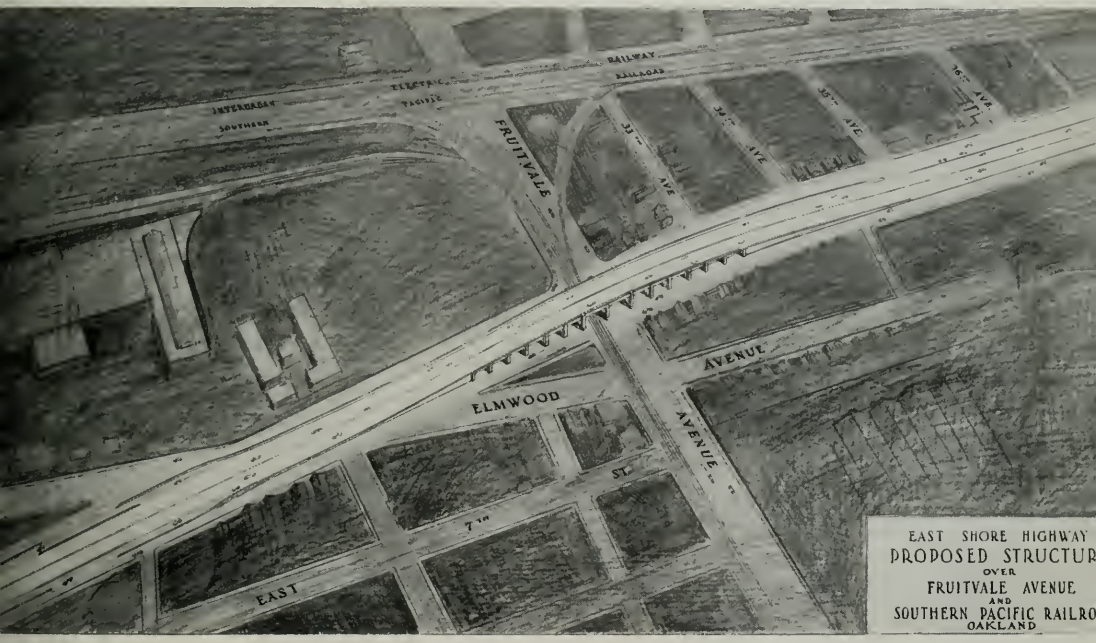
"Naval training stations, drydocks, and other big projects connected with the defense program are on the way or contemplated in the immediate future. The Navy has recognized the need of architectural services and has awarded several contracts to architects in conjunction with engineers so that the necessary drawings and instruments of service may be properly prepared.

"In many instances the architects have to organize so that plans are being prepared during the actual progress of construction, as there is no time to take the conventional steps of preparing plans and calling for bids. The fact that the Navy is recognizing the need and desirability of architectural service speaks well for the profession, and it is hoped that the profession will continue to earn the confidence it enjoys at this time.

"The Army to date has not found it necessary to turn to the architectural profession. Its construction program, being in charge of the Quartermaster's Corps, is apparently of such a nature that the available forces are able to carry on without going outside of the present personnel. There is a general belief that the program will assume larger proportions and that the architects will be called upon.

"Defense housing is beginning to receive a great deal of consideration in various quarters, and some awards have been made to architects for services in connection with some Naval projects.

Proposed Divided Highway Structure for East Shore traffic over Lake Merritt Canal and railroad tracks, Oakland



Courtesy California Highways and Public Works

Sketch of proposed Overhead Structure for East Shore Highway traffic over Fruitvale Avenue and railroad tracks, Oakland

FREEWAY TO EASE OAKLAND TRAFFIC

FURTHER development in Northern California of the freeway type of highway construction will be the proposed East Shore Highway between Oakland and San Jose.

Already $1,030,000 has been spent by the State and the City of Oakland jointly in the purchase of rights of way for the new highway from Fifth Avenue and Oak Streets in Oakland

to Fiftieth Avenue, south of Fruitvale.

The East Shore Highway will be a six-lane divided freeway with separation structures at various important cross roads such as Fifth Avenue and Fruitvale Avenue.

A possible first unit would extend from Fifth and Oak streets to Thirty-fifth Avenue, and cost approximately $2,000,000.

The design of the new freeway, as far as overhead structures and crossing separations are concerned, will be similar to that on the Arroyo Seco Parkway between Los Angeles and Pasadena, now nearing completion, and the design for the proposed Bay Shore Freeway between San Francisco and Palo Alto, and illustrated in this magazine for October.

The East Shore Highway is designed to:

1. Provide adequate transportation between Oakland and valley points for agriculture and industrial needs.

2. Open a satisfactory trade route between Oakland and San Jose.

3. Provide an easier route to reach recreation areas.

4. Eliminate a defense bottleneck, opening routes to the Oakland Naval Supply Depot, the Alameda Naval Air Base, Sunnyvale and Hamilton Fields and Camp Ord.

5. Eliminate traffic congestion during such events as football games.

A report of a traffic check made last June on East 12th Street presented to the California State Highway Commission showed that 40,000 automobiles traveled that day on that four-lane street, which constitutes a traffic bottleneck.

PREFABRICATED FIELD OFFICES

Portable, low-cost field offices which can be quickly assembled and dismantled and easily trucked from job to job, are being produced by WPA workers in Texas for use on new construction projects in that state.

These prefabricated structures, 8 feet by 16 feet in size, with a ceiling 8 feet high and a rounded roof 10 feet high, now are being turned out at the rate of one a day at each of 8 WPA warehouses in Texas and at an approximate average cost per unit of $175. Some 500 of these offices will be produced and distributed to the various project sites.

Like a large but simple jig-saw puzzle, these office buildings consist of 4 floor sections, 4 roof sections, and 12 side-wall sections which can be assembled in an hour and dismantled in 30 minutes. They weigh only 2,225 pounds.

The pieces are fastened with bedlock fittings and bolted together. The pieces may be shifted to make any size or shape office required. The laminated plywood walls are sturdy and the buildings are constructed to stand from 10 to 15 years of ordinary wear. Sliding windows are built in the wall panels and each office is equipped with brackets and tubes for the accommodation of telephone and electrical fittings. The convenience with which the structures may be handled is shown by the fact that sections for three complete office structures can be hauled in an ordinary truck.

While, with limited forces now employed in the WPA warehouses, only one office a day is being produced at each, facilities are available to increase the production to 5 a day at each warehouse should it become necessary or desirable.

BEVERLY HILLS RESIDENCE

(Continued from Page 19)

pine and the sash and outside doors are special size steel type. The sash have rolling screens and outside doors have metal screens which slide into pockets in the wall.

The entire area under the first floor, over the earth, at the unexcavated portions, is paved with asphaltic concrete as an added protection against termites and rot.

Arrangement of the entire plant was planned to utilize fully the possibilities for out-door living and the secluded porches and terraces are available for such entertainment. In this respect the landscape architect has fully cooperated for the consequent pleasure of the tenants.

The walls of the living room, library and main hall are panelled in bleached black walnut, with the judicious use of carving in interesting locations. The other rooms have poplar trim, enameled, while all plaster surfaces are canvas hung and then painted.

The ceilings of the main rooms of the first story are ten and one-half feet clear height.

DRY BASEMENTS
SITE IS IMPORTANT

By RONALD ALLWORK

DAMP basements bode no good—they hasten the corrosion of metals, they favor mildew, molds and decay, they feel cold and clammy, and they are decidedly unhealthy. They injure the reputation of both the architect who designs them and the builder who constructs them. A dry basement, on the other hand, makes for healthful living; it lengthens the life of the structure, equipment and furnishings, and it makes an otherwise unusable space suitable for work and recreation, laundry and storage.

Some basements are dry as a result of waterproofing; others come by it naturally — but many a damp basement would be dry if reasonable precautions and careful workmanship had been observed. It is much wiser to investigate all possible trouble sources and provide any necessary protection against moisture while construction is in progress, since waterproofing is not only costly if done after completion of the building, but it is sometimes impossible. Simple expedients, such as making adequate provision for the removal of roof water, or for the drainage of rain water adjacent to the building, may be the only requirement. It is obvious that the elimination of the cause at its source will obviate any need of providing for its consequences.

That such a procedure is not always followed is admirably illustrated by the experience of the civil engineer who discovered water in his own basement. Full of the theories and practices involved, he delayed action as he pondered the best method of waterproofing. His wife, however, viewed it as a much simpler problem. Unknown to him she took matters into her own hand and had sod placed around the foundation to form a sharp embankment sloping away from the house, to divert the surface water (which she assumed to be causing the trouble) away from the basement wall. Subsequent rainfall proved her assumption correct and the basement remained dry.

Dampness and the presence of water in the basement can always be eliminated by taking extreme measures, but because such measures are not always necessary it is advisable to investigate the possible sources of moisture first, in order to find the most effective (not the most expensive) method of protection. A study of the causes of damp basements finds the following most common.

Surface Water—Surface water usually originates in rains. It comes in contact with basement walls when the grade slopes down in the direction of the house, when the gutters overflow, or when the rains strike the wall of the building in an appreciable volume. The water seeps in the basement through porous areas in the walls or by entering in through cracks or junctions. Surface water exerts no pressure but finds its way into the basement as a result of gravity action.

Ground Water—Ground water, sometimes referred to as the Water Table, is more or less permanent. It seeks a certain level in the ground and exerts a hydrostatic pressure on the foundation when its level is above the basement floor. In some instances, when the site is low and near the sea shore, this level may coincide with the rise and fall of the tide. Ground Water enters the basement in the same manner as surface water, except that it may be under pressure, and hence enter with greater speed and force than surface water. Dampness may also be due to capillary action, which often occurs when the ground water, although below the level of the basement floor, is near enough to be raised to the floor by such action.

Condensation—Dampness may also come as a result of condensation which takes place when warm moist air comes into contact with surfaces cooler than its dew point temperature. Such surfaces may be exposed cold water piping, drain pipes or even the basement walls.

* Excerpt from an article in Pencil Points.

THE IDEAL SITE
A FALL IN EVERY DIRECTION MAKES FOR GREATER DEPTH OF GROUND WATER AND GOOD DRAINAGE OF SURFACE WATER
A GOOD SITE
IT PROVIDES GOOD DRAINAGE ON THREE SIDES BUT IS SUBJECT TO EFFECTS OF DRAINAGE FROM UP LAND SIDE
A POOR SITE
HAS NO NATURAL DRAINAGE AND IT SERVES AS A BASIN FOR SURFACE WATER FROM SURROUNDING SLOPES

SELECTION OF SITE

Unless removed, the condensate will accumulate.

Other Causes—Heavy shrubbery and vines adjacent to the building may bring about excessive dampness in a basement. Other causes such as faulty plumbing, backing up of sewers and leaking refrigerator drains must not be overlooked as possible trouble sources.

Two factors which have an important bearing on the successful design of a dry basement are the location of the house (topographically) and the nature of the soil.

The ideal site is one on the brow of a hill (see Figure 7) which provides a fall or slope in every direction. Such a site offers a better movement of air, a greater depth to the ground water and good drainage of surface water. It is rarely advisable to select a site that is not moderately elevated with a fall in at least one direction. Level of the ground water in any case should be at least ten feet below grade, but fifteen feet is preferable. Depth of the ground water may be determined by digging a test pit during the rainy season which will indicate the probable maximum condition to be encountered.

The most desirable soil is that which is granular, hence open and porous. This type of soil, which includes sand, gravels and loams, readily admits air and water, and promotes the fast dispersement of water. In addition, granular soils compress but slightly, minimizing the settling of foundation walls and the development of cracks. Clay and similar soils may contain large percentages of water due to their fineness. In such instances, if an additional load is placed on a natural and undisturbed bed of clay it results in an expulsion of water until the clay has shrunk or settled to a point where it is again stable. Since this is a slow process which may continue for years, settlement of foundation walls, and their resultant cracking, cannot be assumed to have ceased after a stated period. Conversely, if a load is removed from a bed of clay, as occurs in excavating for a basement, the clay below the excavated area may swell, taking on more water and becoming less stable.

It will be found that the type of soil also has a direct bearing on the height to which water will rise by capillary action. In granular and porous soils this distance may not be more than two or three feet, but in silts and clays the capillary rise may be as great as eight feet. It is therefore obvious that if moisture is to be kept out of the basement, the relation of the floor level to the ground water level depends on the type of soil encountered.

Surface water may have its origin on the roof during a rain. Because of inadequate methods of draining, it can ultimately affect the basement. Or it may be an accumulation of rain water on the surrounding ground surface which follows a slope toward the building. Provision for the removal of surface water should be made whether the basement is watertight or not.

Gutters and leaders are necessary for the proper removal of roof water, and they should be designed for maximum conditions.

A PANORAMA OF ARCHITECTURAL LAW

By HARRY M. MICHELSEN, A.I.A.

"When we build, let us think that we build forever. Let it not be for present delight nor for present use alone. Let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them and that men will say as they look upon the labor and wrought substance of them—'See! This our fathers did for us.'"

—John Ruskin.

ABOUT fifty years ago, a small group of architects under the guidance of the California Chapters of the American Institute of Architects, considered an act to regulate the practice of architecture, in order to protect life, health and property. In those early days, the architectural business was divided into many diversified groups. There were those who maintained the high standards of architecture and the integrity of the profession. The others were operating under many fictitious combinations such as, "Architect and Builder," "Architect and Master Craftsman," or any other title which seemed to be impressive to the prospective client or investor. This particular type of practitioner caused an unlimited amount of humiliation among those who were endeavoring to serve the public in a professional capacity.

Under this incentive to improve conditions, the formation of an act defining the qualifications of an architect was essential to the welfare and protection of the general public and investor. This period was augmented by unbalanced competitive conditions. The prospective clients were uncertain when considering the selection of an architect, due to the many combinations of titles that were prevalent among architects, builders, contractors and engineers.

During the early nineties of the last century, when gold flowed freely and architecture was a magnificent art and science, the young aggressive man with professional aspirations proceeded with the formation of "An Act to Regulate the Practice of Architecture," which would define the status of an architect, and assure the people of better architecture and safety in structures. This group was composed of Octavius Morgan, Seth Babson, Merritt J. Reid, A. M. Edelman, William Mooser, Lionel Deane, Frederick H. Meyer, H. F. Schultze, William Curlett and others, all of whom carried the banner for the architects of the future.

After considerable research and investigation, it was decided to pattern the proposed Act after the one in effect in Illinois. Through the generous assistance of members of the State Board of Architecture of Illinois, sufficient information was obtained to draft a model act.

At a general meeting of the architects in San Francisco in December, 1898, the proposal was submitted for consideration. Many ideas and modifications were proposed, but with sureness and determination, this fiery young group carried on their crusade to protect the public and define the qualifications of an architect.

Early in 1901, the Act was introduced in the State Legislature and passed shortly thereafter. On March 31st of that year, it was approved by Governor George C. Pardee. The original Board of Architectural Examiners was composed of ten members, all of whom were appointed by the Governor.

The first meeting was held in San Francisco on June 21, 1901, at which time the Board was organized and officers elected, rules and regulations were adopted to enable the Board to function smoothly and efficiently. This group, being an energetic body with speed, dexterity and courage to carry out the intent of the Act, held another meeting on July 30th of the same year, for the purpose of considering the applicants for licenses to become architects. On account of the diversified practice of many of the individuals under the pretense of architecture, the work of the Board was extremely difficult to determine to whom certificates

*Report submitted at the annual convention of the State Association of California Architects held at Del Monte in October.

should be granted in accordance with intent of the law. Over three hundred architects were examined, qualified and licensed during the first two years. For the next several years, oral and written examinations were given to the prospective candidates.

The Act was amended in 1903, creating an annual license fee. From then until 1929, the Act remained unchanged, although during this period, many suggestions were made for strengthening the Act, since flagrant violations were taking place.

Section Number 5 of the Act was modified and amended in 1931, to provide that persons preparing plans and other instruments of service without a license shall notify the owner in writing that he is not an architect. At the time of adoption, the amendment seemed to have force and significance which would strengthen the standing of registered architects. Since then it has drifted into complications and increased the work of the State Board of Architectural Examiners.

Among the amendments to the Act, submitted in 1933, were clauses clarifying and defining the powers of the State Board of Architectural Examiners, making it possible for the Board directly to obtain evidence of violation, defining incompetency and giving the Board the power of censure. The failure in passage of these items at the Legislature was regrettable, as the amendments would have given the Board the required power to discipline violators.

The earthquake of Southern California in March of 1933 induced the drafting and passage of the Field Act, regulating the construction of school buildings, and the Riley Act, pertaining to other types of buildings. The adoption of these laws has strengthened both the architectural and engineering professions. The Riley Act, which is now part of the Safety and Health Code, should be amended to guarantee greater enforcement for better protection of life, health and property.

At the General Election, November 6, 1934, Article XXIV was added to the Constitution of the State of California, defining State Civil Service and making provision that the term "State Civil Service" shall include every officer and employee of the State except those included under the fourteen exemptions listed in Section 4. It is apparent that the intent of the law is to exclude the employment of architects in private practice on State work. Opinions have been expressed that the awarding of construction contracts, except in cases of emergency, also violates this section. At the last session of the State Legislature, Constitutional Amendment A.C.A. 62 was introduced to clarify the constitution, but failed on account of lack of support by those who should be vitally interested in this subject. This bill should be submitted again to the Legislature for reconsideration.

The original Contract Act, regulating contracts for State construction improvements, was enacted on March 28, 1876, amended March 22, 1909, further revised on June 10, 1933, to give the Department of Works more power for the preparation of plans and specifications. On May 11, 1939, the Act was amended at the instigation of the "State Department of Finance" and included: "The Department of Public Works * * * shall prepare full, complete and accurate plans and specifications * * * ." This law, along with the Civil Service provisions in the State constitution, has evidently eliminated the architect in private practice from participating in State work, except where the Constitution, under Section 4 provides for certain exemptions.

The "Architects Practice Act" of 1938 which failed in the Legislature of that year, was formulated to improve conditions for the architects and repeal the present Act. This was reviewed at our last Convention in Santa Barbara.

It is apparent that our existing Architectural Practice Act has advanced the quality of architecture, and has been an important medium in establishing a permanent amalgamation of our professional structure.

We are all conscious of the actual proportion

of the nation's use of architectural services, and the production of drawings and documents from other sources. Few of us accept this situation as the natural and permanent result of the progressive application of architecture to all the branches of our life, culture, industry and defense.

We realize our present troubles have arisen because our program has been unbalanced instead of being centralized and unified, while the organizations and efficiency of the building industry have increased and will continue to advance with startling rapidity. We destroy much of the possible advantage to be derived from this progress, by the methods we adopt in our legislative programs, and in our dealings with those with whom we are closely allied. As long as we believe that the problem of obtaining business must be solved by the creation of artificial legislation instead of efficiently organizing and combining with other groups, the situation will continue to follow downward along the avenue of uncertainty.

We as a group should continue to build up the American Institute of Architects, the State Association of California Architects, and assume the leadership in any body affiliated with architecture or the building industry. In these days of mass organization, let us combine with others so we can defend our rights against any agency or detrimental legislation that may attempt to break down the structure that was so ably started a half of a century ago.

FAILURE OF THE TACOMA NARROWS SUSPENSION BRIDGE

Failure of the $6,000,000 Tacoma Narrows Bridge, third largest suspension span in the world, on November 7th, continues the absorbing topic by structural engineers and builders throughout the country. In a 35-mile gale the 2,800 - foot suspension span collapsed and dropped into the waters of Puget Sound, along with chunks of concrete, guy wires and cables. Only the two 425-foot steel towers remain intact. Fortunately there were no fatalities.

In attempting to reach a conclusion as to the cause of the accident, most engineers agree that the design, as finally adopted, was questionable, in that insufficient allowance was made for wind stresses. Use of plate girders on the sides acted as wind barriers and thus increased pressure on the span.

Comparing the Tacoma structure with the Golden Gate Bridge, Russell G. Cone, chief engineer, who flew to the scene to make a first-hand inspection, said that a similar failure could not happen to either of the San Francisco bridges, because they are built to take care of wind stresses. They have open trusses which permit the wind to pass through and thereby reduce the pressure materially. Heavy winds do not sway the Golden Gate Bridge, as they did the Tacoma structure from the very date of completion.

Charles E. Andrew, former assistant chief engineer of the San Francisco-Oakland Bay Bridge, who made the original design for the Tacoma structure, said his plans called for open truss construction, but the design was changed by another engineer to meet the demands of Eastern money lenders who wished to keep down the cost.

Among those who witnessed collapse of the bridge was Professor F. B. Farquharson, who had been engaged in laboratory research for several months at the University of Washington, in an attempt to correct the sway of the span. Professor Farquharson had his movie camera with him and filmed the progress of the bridge's failure—pictures that will surely interest the engineering profession when they are ready for projection.

A short time before collapse of the bridge, the editor of Architect and Engineer received a letter from the office of F. C. Harrington,

Commissioner of Work Projects, Washington, enclosing an article entitled, "Model Solves Bridge Problems," and dealing with the construction and use of an actuated dynamic model of the Tacoma Narrows Suspension Bridge. The article was not published, because no pictures were available at that time. It would seem from subsequent happenings, following completion of the bridge, that the experiments conducted with this model failed to accomplish the results expected; in other words, the model did not solve all the bridge problems. We quote here from the article:

"One of the most unusual examples of the creative work involved in modern test model construction is the actuated dynamic bridge model recently completed by the WPA at the University of Washington on a scale of one to 100, under the direction of Professor F. B. Farquharson of the civil engineering department. It is 58 feet long. The model was built to aid engineers in solving construction problems in connection with the Tacoma Narrows Suspension Bridge.

"The Tacoma Narrows Bridge is the third longest in the world and is the narrowest suspension bridge yet to be designed. Its increased ratio of span to width represents a growing tendency on the part of bridge designers to erect longer and longer spans. Prior to the Golden Gate Bridge, a ratio of span to width of 40, was considered high. The Golden Gate was erected with a ratio of 48, the Deer Island Bridge jumped to 54, and the Tacoma Narrows Bridge design called for a ratio of 72, the greatest yet.

"This unprecedented high ratio of span to width, together with the bridge location, which is subject to swift tides and high winds—the bridge's lateral flexibility created the possibility of a wide deflection under wind—raised a great many problems which called for rigorous pre-construction tests.

"In relation to this, Professor Farquharson, in a special study on the bridge and model and published by the University of Washington, said:

" 'So many pioneering advances have been incorporated in the design of the Tacoma Narrows Bridge that, although the world's third structure in length, it has stepped out well in advance of existing structures in many of its proportions. Experience on certain other structures intermediate between the Golden Gate Bridge and the Tacoma Narrows Bridge in ratio of span to width and sag ratio, have indicated that the problem of vibration or undulation under action of wind and traffic, may have entered a region where information gathered from previous structures may be of little worth.'

"It was thus necessary to construct a full dynamic model on which these various forces could be impinged and the reaction of its structural members measured and studied.

"It is, of course, quite common practice to build models of bridges during erection of the full size structure. These in the past, however, have been only static models, useful in solving load or weight problems. As a rule such models consist only of a cable and weight apparatus designed to simulate conditions on only one section of the bridge at a time. Such a model was not adequate for this bridge, as its range of possible tests was limited.

"The model eventually devised to simulate all conditions of the full-size structure was a 58-foot structure, built to a scale of one to 100 as to dimensions, and one to 45,000 as to weight. Great care and ingenuity was used in assuring that the model had the proper elastic and weight values in all of its members, so that the model would be a scientifically accurate prototype of the actual bridge. An ingenious system of electro-magnets and controls were devised to provide lateral or side thrusts on the model which would simulate any wind condition that might deflect the main structure. A system of dials, sensitive to one ten-thouandths of an inch, register stresses and pulls and lateral thrusts, providing accurate measurements for study.

"Expenditures in the neighborhood of $11,000 were made for the various materials, testing equipment and labor connected with this model. The WPA supplied the majority of skilled labor necessary for its construction."

ARCHITECTS' BULLETIN

Issued For

THE STATE ASSOCIATION OF CALIFORNIA ARCHITECTS

Northern Section

STATE ASSOCIATION MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

Editor
Harris C. Allen

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Convention Echoes

AS anticipated in our last Bulletin, the Thirteenth Annual Convention of the State Association of California Architects was "of interest and importance to the profession in California." The meetings were held at the Hotel Del Monte, October 10, 11 and 12, and a surprising amount of work was accomplished with a facility that was a credit to President Ernest E. Weihe, who presided, and to his committee on arrangements, Edward J. Maher, George P. Simonds and Robert Stanton.

The convention opened Thursday, October 10, with the customary ceremonies, devoted Thursday afternoon, all of Friday and part of Saturday morning, to the consideration of a number of important matters, and closed Saturday noon with the installation of new officers. On the evening of the last day a formal farewell dinner was devoted entirely to "an elaborate, long-drawn speech" by John J. Donovan, prompted by Lester W. Hurd, for the awarding of the golf trophies!

The new State Association officers are: Merrill W. Baird, president; Frederick H. Reimers, vice-president; Vincent G. Raney, secretary; and Robert H. Orr, treasurer.

The officers of the Northern Section are: Frederick H. Reimers, president; Wayne S. Hertzka, vice-president; Vincent G. Raney, secretary; and Mario J. Ciampi, treasurer. Those of the Southern Section are: Merrill W. Baird, president; Vincent Palmer, vice-president; Winsor Soule, secretary; and Robert H. Orr, treasurer.

Professional Relations

An illustrated talk by Vincent Palmer of the Southern Section, proved most enlightening on what has been done in the South to overcome subversive activities in the profession, a matter with which local architects are familiar.

Public Relations

One of the high-lights of the convention was the session on Friday morning devoted to the subject of Public Relations. This was thoroughly covered in a paper by Norman K. Blanchard of San Francisco and brought out much of interest, with definite plans to improve these relations.

In Mr. Blanchard's opinion the formation of a women's auxiliary, to make contacts for which they are best fitted, and the appointment of speakers' groups for public gatherings would be especially helpful. Reference was made to the women's auxiliary of the medical profession, reportedly accomplishing much good for that group which, it was pointed out, has problems as difficult as those of the architects.

FREDERICK H. REIMERS
President-Elect of Northern Section, State Association of California Architects.

Other recommendations by Mr. Blanchard included the placing of exhibits of an educational nature in public places, educating pupils in schools as to the purpose of architecture, and helping the press get reliable information about the profession.

Continued use of radio broadcasts was strongly endorsed, and it was stated that an effort would be made by the Northern Section to support the Southern Section in a state-wide hook-up of the programs which have been on the air each Sunday of Stations KFRC and KNX. Methods of financing these programs were discussed at length.

Federal Housing Act

The Federal Housing Act was given considerable time on the program which scheduled two talks on the subject. The first was made by the chief architectural supervisor of the San Francisco office, G. Fred Ashley. The Act was inspired, he said, by successful housing projects built in Europe. The European methods of financing differ from ours, he said, but the programs and results are the same.

Enacted into law six years ago, the Federal Housing Act has been a most satisfactory undertaking, Mr. Ashley stated, the loss experience having been surprisingly low. He explained the work of the architectural sections of FHA, adding that the character of plans submitted had improved; that they are now of a pretty fair average, and that the five-room, two-bedroom house predominates.

Mr. Ashley concluded with a statement that California is ahead of other sections of the country in taking advantage of the FHA plan, this state doing 20 per cent of all the business that is handled under the Act.

The second paper on the Federal Housing Act, and the workings, power and program of the administration was read by Fred Stott, Chief Architect for the eleven western states. Regulations of the Act, and changes that have been made were described at some length.

Illustrated Talk on Earthquakes

Most of the Friday afternoon session was spent in listening to a description of earthquakes by Professor R. R. Martel of the California Institute of Technology, who illustrated his talk with a series of lantern slides. The earthquake in the Imperial Valley last April was given particular attention by Professor Martel. He stated that the 1940 fault extended 20 miles north and 20 miles south of the International Border, but that scientists had not yet determined whether it was on the San Jacinto or the San Andreas fault.

Naturally, he said, the Imperial Valley earthquake damaged the worst in materials, design and construction. He attributed another weakness to the valley heat, which sometimes precludes the proper curing of concrete and mortar.

According to Professor Martel, 15 schools in the valley, constructed according to State standards, came through the April shake without damage, and two water tanks, both built in accordance with fire underwriters' requirements, were likewise undamaged. His talk was followed by an interesting demonstration, with wood and metal objects, showing the effect of ground movement on different types and sizes of structures.

Low-rent Housing Projects

A non-technical talk on the administration angle of the United States Housing Act was made by L. W. Post, special assistant to the administrator in charge of Region No. 7 of the USHA, and formerly a member of the Housing Authority of the City of New York. Mr. Post stated that there are now 500 local housing authorities in existence, all being backed by the USHA, and that the authorities expect to continue to draw on all of the professional talent they can to build housing. He is of the opinion that there is a big future for private, large-scale housing projects.

Large-scale housing presents a challenge to the architect, according to Arthur B. Gallion, regional project advisor in the San Francisco office of the USHA, and an architect by profession, who said that a knowledge of analytical planning is necessary to a successful project. Mr. Gallion stated that the use of the services of 100 California architects on housing projects to date was evidence that the profession has been recognized by the Authority.

Defense Housing Program

Paul Jeffers, structural engineer, Los Angeles, advised the members of the Association that considerable opposition was developing over the method of handling the low-cost, defense program, for which $150,-

000,000 was provided in a bill signed by the President a few weeks ago. Various professional groups and chambers of commerce, he said, have protested to the National Defense Council, requesting that the Act be administrated by the USHA and not by the Public Buildings Administration, under whose jurisdiction it now is.

Some discussion of the subject followed Mr. Jeffers' remarks, with the result that the matter was referred to the Executive Committee for whatever action it may wish to take.

Convention Resolutions

Ten resolutions were submitted to the Convention, all of which were adopted. They included a vote of thanks to the committee in charge of the Convention, to the Producers Council Clubs, to the Hotel Del Monte, to Professor Martel, and to the members of the FHA and the USHA who spoke.

Other resolutions provided for the appointment of women's auxiliaries in both the Northern and Southern Sections; the appointment in the North of a committee, similar to the one in Los Angeles, to arbitrate differences between architect and client; and instructions to the incoming President to give due study to proposed changes in the By-Laws and Constitution of the Association.

A resolution commended the State Board of Architectural Examiners for work on the state-wide legislative committee; and another provided that radio programs become a coordinated, state-wide activity and that a committee be appointed to attain that objective.

Future conduct of the business of the Association, wider cooperation with the news services with which they are dealing, and vote of thanks to the outgoing officers and committees were the basis of the remaining resolutions.

Conclusions and Adjournment

An interesting paper on architectural legislation, and the California Act to Regulate the Practice of Architecture, was read by Harry M. Michelsen of San Francisco. He concluded with a plea for the continued upbuilding of the American Institute of Architects, the State Association of California Architects, and other branches of the building industry.

The business of the Convention concluded with the installation of the new officers, and the delegates adjourned at noon on Saturday to enjoy the golf tournament and the ladies' programs of teas, bridge and tours.

STATE BULLETINS

Recently your editor has had an interesting correspondence with A. L. Harmon of New York, on the subject of State Association Bulletins. The fact that a man of Mr. Harmon's calibre is giving time and thought to his State Association's interests is important. The firm of Shreve, Lamb and Harmon toys with millions on its drafting board, as most of us study over thousands. Mr. Shreve, besides being a past president of the Institute, is chairman of a sub-committee under the National Defense Committee.

Mr. Harmon has investigated seven State Bulletins. After comparing and collating his data, he writes: "Many thanks for your helpful answers. * * * Your publication arrangement is unique. If our Association decides to try and run a Bulletin you will no doubt have some one asking you more questions. I am interested in how you work that 1200 licensed architects and 1200 members of the Association idea.

"I have flirted, myself, with the thought that a hook-up between the State Licensing Bureau and the State Association could make membership in the Association a necessary postlude of a license. Of course, it sounds a bit like trade unionism at that. Does the California Association carry a big stick or is it just a desirable club?"

Mr. Harmon evidently draws a distinction between a Stick and a Club.

OUR SOFT-VOICED PRESIDENT

Herb Caen writes a column for the daily press, "It's News to Me." He has a yen for artists, including architects; Tim Pflueger and Mike Goodman are frequently in his column. And now he has turned his attention to Fred Reimers, as attested in the following excerpt from a recent issue:

"Last week, at Del Monte, the State Association of Architects elected as their new president San Francisco's Frederick Reimers—so at the final banquet he was paged, over the loud speaker system, to report to the head table to receive 'a token of appreciation.' When he got there, Toastmaster John Donovan, with many a flourish, presented him with—his own golf clubs! Whereupon, Reimers, a bit miffed, bent over and told Donovan, in a soft voice, just what he thought of him and the whole gag. Which would have been all right—except that the loud speaker system carried his unprintable thoughts to every part of the room!"

IF YOU WANT A FEDERAL JOB

The following information is required from architects and consulting engineers desiring consideration in design of Army construction projects:

Submit a letter to the Quartermaster General, Washington, D. C., requesting consideration in case design contracts for various projects are awarded to civilian architects or consulting architects on a fee basis; letter to contain the following information:

1. Full experience record indicating clients by name, location of project, type of project and money value.
2. Organization available, with particular view to rapid completion of plans and specifications.
3. List of projects designed for Federal agencies.

—War Department,
Office of the Quartermaster General, Washington.

FIRST FALL CHAPTER MEETING

The first meeting of the fall season of Northern California Chapter, A.I.A., was held October 5, and proved to be a very gala affair. Business worries were put aside for the afternoon, while the membership departed en masse for Sonoma, to visit the historic monuments in that locality.

Members present: Messrs. Harris C. Allen, G. Frederic Ashley, John K. Branner, Henry C. Collins, Henry H. Gutterson, Lester Hurd, Ellsworth E. Johnson, John B. McCool, Chester H. Miller, James H. Mitchell, William Mooser, Jr., Keith Narbett, Warren C. Perry, Ralph Pollack, Frederick H. Reimers, Ernest E. Weihe, John Davis Young.

Guests present: Mr. Adler of Sonoma, Mr. Wilson of the Sonoma Chamber of Commerce, Edgar I Bissantz of the U. S. Housing Authority, Serge Chermayeff, noted English architect, and Messrs. Bolles, Lindley, Nussbaum and Schroepfer.

The party traveled from San Francisco by chartered bus, reaching Sonoma about three o'clock in the afternoon. Messrs. Adler and Wilson joined the group there, directing the tour which led first to the Sonoma Mission, where the entire premises were opened for the occasion.

After spending some time at this historic spot, the group was taken on a tour which included visits to the General Vallejo house and grounds, the "Swiss Chalet" adjacent, and the old Vallejo factory, which was much admired for its charm.

Returned to Sonoma, the party was entertained by Mr. Adler in his home where a most interesting description of the early times and methods of workmanship was given by the host. Among the many fascinating things that Mr. Adler possessed were the original planes and tools used by some of the early craftsmen in the construction of the various old buildings. Much comment was aroused by the exhibition of some very skillful carpentry, the extremely narrow window muntins being particularly praised.

Mr. Wilson next conducted the party on a tour of the Blue Goose Inn, the old adobe in which the Chamber of Commerce offices and museum are situated. Here more examples of fine craftsmanship were admired.

Dinner was served at the Swiss Hotel on the Plaza, a building that has been in use since 1836. There was no business to be discussed and the evening was turned over to Messrs. Adler and Wilson, who entertained with tales and anecdotes of the early settlers. —J. D. Y.

OCTOBER MEETING

The October meeting of Northern California Chapter, A.I.A., was held at the St. Francis Yacht Club, Tuesday, the 29th, with President James H. Mitchell presiding.

Guests present included: Langdon Post, director of the Regional Office of the U. S. Housing Authority; Mrs. Post, Miss Alice Griffith, organizer of the San Francisco Housing Association; Randall Larsen, president of the San Francisco Housing Association; Messrs. Bissantz and Gallion of the United States Housing Authority, Arthur Eaton, informational director of the San Francisco Housing Authority; Francis Violich of the Alameda County Planning Commission, and Messrs. Bolles and Schroepfer.

A joint meeting of the Chapter and the State Association of California Architects was announced to take place November 27, 1940.

Mr. Post briefly sketched the problems that must be solved in attempting to provide adequate housing. He presented the idea that the housing projects must be considered as "living plants," in the same light as we think of "industrial plants" — thus making a purely twentieth century problem, in the solution of which architects must take the lead.

Mr. Larson discussed the aims and functions of the San Francisco Housing Association, particularly the educational work that is being done by that organization to further housing, and also emphasized the need for private capital to realize the benefits of housing projects.

Miss Griffith expressed her gratification at seeing the completion of the first low cost housing projects here and the progress of slum clearance work. She asked the cooperation of the architects in effecting improvements in the City Planning Commission, and mentioned the urgent need of a master plan for San Francisco.

Mr. Eaton reported on a study that was made this summer, describing the lethargy found in the City Planning Commission, and making special mention of the fact that the Commission had agreed to prepare a master plan and had failed to do so. Recommendations made from the report included new personnel on the Commission, a new zoning ordinance and an attempt to relate San Francisco to the surrounding areas.

Albert Evers spoke of the further responsibilities of the architects in solving the problem of housing for the great "white collar" group who are just above the low income class.

Upon motion of Mr. Wurster, seconded by Mr. Allen, the Executive Committee was authorized to investigate the matter of appointment of delegates to attend the meetings of the City Planning Commission, to facilitate the proper functioning of that body.

Suggestion was also made that a joint conference board be organized to follow the progress of all planning matters and to make periodic reports to the various member groups as to developments in these matters.

L. A. CHAPTER ROUND TABLE

An interesting round-table meeting of Southern California Chapter, A.I.A., was held at the Wilshire Melody Lane in Los Angeles, October 8.

George Meredith, whose business is public relations, talked informally on the subject and informed the members that friendly relations with everyone they come in contact with are necessary to a successful public relations program.

Before adopting a program, Mr. Meredith said, the effect it will have should be carefully considered and a particular effort should be made to avoid anything that will create ill will.

He cited several cases of clever handling of this type of program, one in which Ivy Lee was hired to change public opinion of John D. Rockefeller, and which he very successfully did. Another was the Creel Commission's work on public information during the first World War.

Creation of favorable public opinion is possible, in Mr. Meredith's opinion, without violating any of the ethics of the architectural profession.

Donald Beach Kirby referred to some of the ground work which has already been done by the Chapter public relations committee and emphasized the importance of this program.

The profession's resonsibility to the young architect was discussed at length by Graham Latta, Whitney Smith, Kemer Nomland, Ben O'Connor and A. C. Weatherhead, dean of the School of Architecture at the University of Southern California.

Mr. Smith contended that there should be a smaller gap between the completion of school and the examination for a license to practice architecture. He said that a man in California is fortunate if he gets his license to practice before he is 35 years old, as a result, some of the best years of his life are spent in apprenticeship.

How to bridge that gap has not yet been determined, according to Mr. Weatherhead, and any idea as to how it can be done will be welcomed. With business conditions as they now are it is difficult for most offices to pay for the services of green men, he said, and just how they are to get the necessary experience is still an unsolved problem.

According to Gordon B. Kaufmann, a director of the Institute, various registration boards, schools and the Institute are working together as an accrediting group to tie in school, training and business in an effort to get the man into actual practice in the shortest practicable time.

A discussion on the encouragement of better design was led by Mr. Kaufmann, who believes that design has progressed marvelously well. R. Germain Hubby said that an architect should study his client and give the client's plan a design that will fit in with his particular character.

An interesting climax to the meeting was a resumé of conditions in the architectural profession in England, taken from the August bulletin of the Royal Institute of British Architects by Herbert J. Powell.

Richard White, an investigator for the State Board of Architectural Examiners, and Jack Shaw, former president of the Cornell Club, were guests.

WASHINGTON STATE CHAPTER

Maintenance of the present schedule of architects' fees was urged by John Graham of Graham and Painter, architects and engineers, Seattle, at the monthly meeting of the Washington State Chapter, Thursday evening, October 3, at the College Club, Seattle. A committee was named to investigate and study fees for the purpose of re-establishing the fee schedule as set up by the Chapter. This action followed discussion of the new schedule of fees announced for preparing plans on national defense housing.

Secretary Victor N. J. Jones read a letter from A. Glenn Stanton, Oregon Chapter president, proposing a joint meeting of Oregon and Washington Chapters, which would include the new Spokane Chapter.

SPOKANE CHAPTER FIRST MEETING

First regular meeting of the newly formed Spokane Chapter, A.I.A., which was granted the organization's 71st charter on May 17, this year, was held Friday, October 11, at the Spokane Hotel in Spokane. The new Chapter draws members from eastern Washington and northern Idaho. Officers of this Chapter are: President, Harold C. Whitehouse, Spokane; First Vice-President, G. A. Pehrson, Spokane; Second Vice-President, Stanley Smith; Secretary - Treasurer, Edwin C. Peterson; and Henry C. Bertelsen, Spokane, executive member-at-large. The Spokane Chapter will follow closely the forms of the national Institute, having entirely professional objectives.

ANOTHER STEEL BRIDGE COMPETITION

The American Institute of Steel Construction has announced another annual bridge design competition (open to bona fide registered students of structural engineering and architecture in recognized technical schools of the United States and its possessions) and offers three cash prizes of $200, $100 and $50 for the designs placed first, second and third.

A jury of nationally known engineers and architects will judge the competition on February 19, 1941. Drawings must be received at the executive offices of the American Institute of Steel Construction, 101 Park Avenue, New York City, not later than February 10, 1941.

NO JUMP IN BUILDING COSTS

Editor Architect and Engineer:

Replying to your favor of the 24th instant as to increased prices of materials, etc., and increased cost of construction, would state the industry as a whole seems to be in a sound condition. Such increases in the material as have occurred to date have only been small and are largely confined to lumber. In general the lumber market is in a somewhat upset condition, with a shortage of certain numbers having occurred through large orders.

The wrtier has recently made a survey throughout Northern California of available supply of mechanics, indicating there is no shortage. Also, there have been no increases in San Francisco in the wages of mechanics or laborers during 1940—with the exception of roofers, who were raised from $9.70 to $10.00 a day in order to conform to the East Bay wage. We probably have more data on labor and material building costs in this office than in any other similar office in the West, and these files are available at all times. We furnish the government monthly with a report on any changes in the price of common labor, hod carriers (brick), cement, sand, crushed stone, gravel, lumber, structural steel, reinforcing steel, hollow tile and brick. This report is sent monthly to our national office in Washington and in turn is turned over to the government and constitutes the basis of government data which is published by them.

I note the clipping you have enclosed and that it tells about increases in home building costs and labor costs, etc. This kind of propaganda should not be put out, as it certainly hurts the industry and so far as labor costs are concerned there have been no increases in 1940 throughout Northern California worth mentioning. Increases on the list quoted below are confined to lumber, structural and reinforcing steel (material in demand to meet the government preparedness program).

Attached is a list of prices in above materials, showing comparison between July and October.

WM. E. HAGUE,
Secretary-Manager, Central California Chapter,
Associated General Contractors.

NEW STANDARD HIGHWAY SPECIFICATIONS

Now available for distribution is the revised edition of Standard Specifications for State Highway Construction, published by the California Division of Highways and dated July, 1940.

This volume is to supersede the present volume of Standard Specifications dated January, 1935. No attempt is made to describe the changes and modifications between this new volume and the older volume and all interested persons are cautioned to become familiar with the new book as soon as possible, as it is proposed to base all work advertised as of November 15 on the new specifications.

DREAM KITCHEN CONTEST

McCall's Magazine announces a "Dream Kitchen Contest" with 113 prizes aggregating $1,250. The contest closes December 31. Entry blanks with full details may be obtained by addressing the Modern Homemaker, McCall's Magazine, Dayton, Ohio.

A COMPARISON OF BUILDING COSTS IN JULY AND AUGUST, 1940

LABOR	JULY	OCTOBER
Common Labor (Building) per hour	$0.81¼	$0.81¼
Hod Carriers (Brick) per hour	$1.25	$1.25
MATERIALS		
Cement, barrel, delivered, without bags	L.C.L. $2.22½ C.L., $1.91 net (tax included)	L.C.L. $2.22½ C.L., $1.91 net (tax included)
Sand, cubic yard, delivered	$2.42 net (tax included)	$2.42 net (tax included)
Crushed Stone, 1½", cubic yard, delivered	$2.52 per cubic yard	$2.52 per cubic yard
Gravel, cubic yard, delivered	$2.52	$2.52
Lumber, per M, 1-10 No. 1 common	$28.50 to $29.50	$30.00 to $31.00
Structural Steel, 3"-15" sections, per 100 lbs. delivered	$3.45	$4.25
Reinforcing Rods, ¾", per 100 lbs. delivered	$2.25 c/l cut to length, delivered, plus tax. Bending and detailing, $2.60, $2.55; L.C.L., $2.90.	$2.30 c/l cut to length, delivered, plus tax. Bending and detailing, $2.85, $2.70; L.C.L., $3.00.
Hollow Tile, 4x12x12, per piece, delivered	$94.50 per M	$94.50 per M
Brick, per M, common, delivered	$15.00	$15.00

Among the Architects

ADDITION TO FACTORY

The Pereta Sausage Company of Sacramento has had plans prepared by Harry J. Devine, architect, with offices in the Cronan Building, Sacramento, for a one-story reinforced concrete addition.

The same architect has completed drawings for a $20,000 frame and stucco residence at Elk Grove for M. Zehender.

REDWOOD CITY RESIDENCE

Arthur D. Janssen of Atherton has completed plans and specifications for a six-room house to be built on Whipple Avenue in Redwood City for A. C. Plehiers. The house will have brick veneer exterior, steel sash and shingle roof.

BEAUTY PARLOR AND STORES

Robert R. Jones, architect of Carmel, has completed plans for a one-story beauty parlor and store building to be built in the Montclair District, Alameda County, for an unnamed client. A contract has been let to Younger Bros. of San Anselmo for $22,400. The structural engineer is M. D. Perkins, 110 Sutter Street, San Francisco.

STATE HOSPITAL

Bids will be opened shortly for the construction of a five-story reinforced concrete psychiatric hospital of 100 beds at the University of California Campus, Parnassus Avenue and Fourth Avenue, San Francisco, from plans by the State Architect, Sacramento. The project will cost $500,000.

S. F. ARCHITECTURAL CLUB

The regular November business meeting of the San Francisco Architectural Club held at the club quarters, 130 Kearny Street, Wednesday evening, November 6, inaugurated the organization's fortieth year of existence.

Newly elected officers are: President, Clyde F. Trudell; Vice-President, Edmund Rybicki; Secretary, Edward Isola; Treasurer, Raymond Carpenter.

By training young architectural draftsmen through its classes of instruction in design, engineering, specifications and estimating, the San Francisco Architectural Club has contributed more, throughout the last forty years, to the growth and architectural beauty of the city than any other similar medium, according to a statement by the club's new president, Mr. Trudell.

Guest speaker for the November meeting was Arthur Eaton of the San Francisco Housing Authority who supplemented his talk with a showing of the film that has created so much national interest, "The City."

PERSONALS

Percy G. Ball, architect, who has been associated in professional practice with Silas E. Nelson, 407 Sheridan Avenue, South Tacoma, is now a member of the architectural staff of the Siems Drake Puget Sound organization.

Irwin E. Muri, member of Russell, Lance and Muri, architects, 319 South Seventh Street, Tacoma, is enrolled on the technical staff of the Public Works Department, Puget Sound Navy Yard, Bremerton.

Sidney Bergseth, architect, formerly on the staff of Graham and Painter and for the past several years employed at the Puget Sound Navy Yard, is stationed at the Tongue Point Naval Base, near Astoria.

GEORGE GOVE STUDIES HOUSING

Transcontinental pilgrimage was enjoyed by George Gove, member of Heath, Gove and Bell, architects, Puget Sound Bank Building, Tacoma, during the late summer and early fall. On the way to the World's Fair in New York City he studied and observed housing projects, particularly those in and near Chicago. On the return swing he called at the office of various Federal agencies in Washington, D. C., which deal with housing.

S. F. ARCHITECTS ARE PRIZE WINNERS

Two San Francisco architects whose recent work was very generously exploited in this magazine, have been awarded further recognition by having their designs approved by a jury for House and Garden Magazine. Clarence Mayhew has received first award for his design of a large house in the class A division, while John E. Dinwiddie received first prize for his design of a small house in the Class B division.

JOINT ARCHITECTS MEETING

The November meeting of Washington State Chapter was held at the College Club November 7th at 6.30 p.m. Speaker of the evening was P. Hetherton, consultant of the National Resources Planning Board, assigned to the Washington State Planning Council. Mr. Hetherton laid stress to State and local accomplishments and problems.

A joint meeting of Oregan and Spokane Chapters will be held in Seattle Saturday and Sunday, November 23rd and 24th, with participants from Oregon, Spokane and Vancouver, B. C.

LAST LOOK AT THE FAIR

David M. Jack, member of A. E. Doyle and Associates, Pacific Building, Portland, enjoyed a parting glance at the Golden Gate Exposition in San Francisco just before it closed.

CONTROLLED LIGHTING PROTECTS EYES OF OFFICE WORKERS

AN automatic control for interior lighting which keeps the illumination in a room at a desired level, and a new small-diameter building wire which increases the capacity of existing wiring systems by as much as 400 per cent, are among the innovations reported in a research bulletin of the Producers' Council, edited by the Structural Service Department of the American Institute of Architects.

The automatic control operates as though an invisible electric robot with hands constantly on the light switch was told to guard the eyesight of those present in a room. The apparatus functions by means of a photo-electric cell which turns the electricity on when the natural illumination from skylights or windows becomes poor, and turns it off when a sufficient amount of light is present.

Especially designed for offices and large rooms, the fixture can be easily adapted to existing lighting equipment or to new installations. It can be turned off altogether at night. The control is particularly valuable for rooms without a direct sky exposure and with windows on only one side. In such instances the section of the room farthest away from the windows seldom receives a sufficient amount of illumination. The control can be installed on a separate circuit so that it will operate only the lights in the darker part of the room.

"The device is compact and can be installed in the most carefully designed interior," the bulletin says. "In rooms which do not have direct sky exposure, natural illumination on spaces farther than 10 feet from the windows may not be sufficient to justify photo-electric control for the inside row or rows of lights.

"For such installations it is recommended that lights over the space farthest from the windows be burned continuously during working hours and that photo-electric control be applied only to the lights nearest the windows. If, however, it is desired to control automatically the lights farthest from the windows, separate photoelectric control should be provided for these lights.

"Adjustment is simplest if the room unit is mounted about in line with the row of lights nearest to the windows and aimed in such a way that direct light from these luminaries will not fall on the phototube. The phototube should be aimed so as to receive natural illumination through the windows, preferably from the sky, since it is this illumination, and not the aggregate illumination in the room, upon which the relay depends for its operation. It is essential, however, that direct sunlight be prevented from reaching the phototube."

The new type of building wire is coated with a plastic compound which serves both as an insulation and as a finish. "The advantage of this new wire is that it enables existing raceways to be rewired with more wires or larger wires," the bulletin points out. "Effective copper in raceways can be increased as much as 400 per cent.

"The capacity of wiring systems can be increased in all existing buildings which have wire run in raceways—stores, factories, office buildings, apartment houses, schools, and hotels. All parts of a wiring system can be made heavier, such as feeders, and branch circuits.

"Rewiring may be done with the new wire inexpensively because new raceways need not be installed and, of course, walls, floors and so forth need not be torn out with attendant repair and redecorating expense. The plasticized polyvinyl chloride compound used to insulate the wire is a product of limestone, coal and hydrochloric acid and has qualities that are not available in other forms of insulation. The unusual characteristics of the compound make possible the reduction of the wall thickness of the insulation and the omission of an over-all braid.

"The new wire is practically ageless since the compound does not oxidize or deteriorate. It remains the same year after year and retains all of its original qualities even at rated temperatures. The wire will withstand the abuses of handling during shipping and storage. It will also withstand ordinary abuses during installation, such as being pulled through conduits, around corners and over the edges of outlet boxes. It will withstand the weight of other wires when a bunch of wire is passed around a bend under considerable tension.

"The development of this new wire has made it possible to rewire many buildings that would have been rewired long ago if the cost had not been prohibitive. Now wiring systems can be modernized at reasonable cost to supply current for today's high intensity lighting and today's electrical equipment."

A new enamel for sinks, tubs and hospital equipment is a ceramic material, highly resistant to sudden temperature changes and with a glass-like surface that is extremely hard and brilliant. Surface accumulations due to medicines, ordinary acids, or from sulphur or iron deposits in water may easily be removed from the enamel without impairing the gleaming finish.

A gas-fired boiler for hot water heating systems has been developed for low-cost housing, the bulletin continues. "The new boiler opens the way to infra-red ray heating and its greater comfort in the majority of American homes. It is the practical answer to individual apartment installation, with personal control of temperature. It is compact and requires no fuel storage.

"Fuel bills may be paid by the owner, or directly to the gas company by the tenant. The boiler is clean, odorless, quiet and 100 per cent automatic. It is shipped completely assembled, with housing controls mounted in position. Installation cost is cut to a minimum by removing this burden from the contractor, and proper assembly of controls is assured. All electrical control wiring is connected to an electric terminal box, ready for final connection."

THIS RESIDENCE IN PIEDMONT HAS SUN-SHADE WINDOWS

LUSTRABLU GLASS APPROVED BY MEDICAL PROFESSION

"WHO would ever think," said the doctor, "that a tinted glass would mean so much to vision?" This statement was made just after the first inspection of the new Medical Dental Building at Santa Rosa, California, designed by C. A. Caulkins, Jr., architect of that city. Yes, the windows certainly imparted unusual depth and distinctness to the view. Everything was easy to see—no glare—no distortion—the entire effect was one of gentle optical restfulness—it was as though your eyesight had been suddenly, miraculously, wonderfully improved.

We were told that the windows were glazed with the new Lustrablu window glass and yet we had never been conscious of the fact that we were looking through a tinted window pane. Some one showed us how the windows open (giving the effect of ordinary window glass) the reflected light on table tops caused a most irritating eyestrain. Then, when the Lustrablu windows were pulled down again your eyes immediately felt the relief and things that had looked blurred to a certain extent became soft, friendly, easily seen surfaces.

Everyone was quite enthusiastic about the visual marvels of this new Lustrablu window glass. It did not reduce or color the light it transmitted but only cooled and softened its effect. There didn't seem to be the slightest danger of having it affect interior color schemes and on the outside it gave an interesting architectural depth to the building, making surrounding windows glazed with plain glass appear harsh and flat.

This so-called 'sun-shade' window glass is the outcome of five years' research into California and Florida glazing needs. The result is so much ahead of expectation that Lustrablu is already being used extensively in schools, offices, operating rooms and other places where eyestrain is a serious factor. Literature on the new Lustrablu glass is available through the offices of its inventor and manufacturer, the American Window Glass Company, at Pittsburgh, Pennsylvania.

BLAISDELL REUNIONS

Nathaniel Blaisdell, retired San Francisco architect, is president of the Northern California unit of the descendants of Ralphe Blaisdell (formerly Blesdale), hardy English sea captain whose ship, Angel Gabriel, was wrecked off Pemaquid Point, Maine, in 1635. The former San Francisco architect attended a reunion of the Blaisdell descendants in New Hampshire the past summer and last month he was among the speakers at a reunion of the California descendants in Santa Cruz.

OAKLAND RESIDENCE

From plans by Irwin M. Johnson, 449 Moss Avenue, Oakland, a $12,000 residence will be built on the Paramount Road, Oakland. There will be seven rooms, three baths and a two-car garage.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

462. STEEL HOUSES

American Iron and Steel Institute has an attractive booklet containing some of the best photography seen by this writer. The booklet is illustrative of the uses of steel in home building and the important place that steel has in home construction. Send for a copy. Use the handy coupon below.

463. ALL ABOUT GLASS

Pittsburgh Plate Products is the title of a booklet issued by the Pittsburgh Plate Glass Company. There are many pertinent facts about glass in the text which is illustrated with pictures and drawings. This is a really interesting little booklet.

464. ACOUSTICS

Celotex Corporation has favored us with another copy of "The Quiet Forum," company organ in booklet form. All previous numbers have proven of interest and this present one is no exception. Send for your copy.

465. HEATING

The Shaub Engineering Company, a newcomer to this page, has published a booklet called "Shaub Systems—a Gateway to Boiler Room Efficiency." There are facts presented in this booklet which make it worth while reading. The coupon will bring you a copy.

466. STEEL STAIRS

A handbook of Standard Practice Data for Steel Stair Construction has been compiled by the Ohio Association of Ornamental Metal Manufacturers and approved by the National Association of the same. The handbook contains a full set of plans and specifications. You should send for a copy of this book.

467. VALVES

The Kennedy Valve Manufacturing Company has issued Catalogue No. 63 which gives full prices and details of their valves, pipe fittings and fire hydrants. A very complete catalogue and well printed and bound.

468. STEEL FOR HOMES

"Steel For Modern Living" is the title of a most attractive booklet just put out by The United States Steel Corporation. All illustrations are in color and the text of the booklet is on the adaptability of steel to modern home construction. Send for a copy by using the coupon below.

469. STAIR TREADS

Stair treads, gratings, surface armor and steel floor plates are all described and illustrated in a broadside issued by the William F. Klemp Co. These are products for use in plants, on bridges and in public buildings. Send for your copy.

470. FOUNTAINS

A new catalogue has just been distributed by the Bradley Wash-fountain Company. It has data on fountain equipment together with planning suggestions and specifications. It is fully illustrated.

471. COOLERS AND VALVES

Fedders Manufacturing Company have a new folder illustrating their unit coolers and valves for "Comfort Cooling." This folder contains all the pertinent data and specifications. The use of the coupon below will insure your receiving a copy.

472. MINIATURE LUMBER

A Chicago firm is bringing out a complete line of miniature lumber materials and millwork from which architectural and engineering models may be built. Material may be had in "lengths" for the convenience of the designer or builder in making scale models of houses for their clients. Fill out the coupon and details will be mailed without cost.

473. SWITCHES

To meet the demand for larger electrical capacities in switches with smaller overall mechanical dimensions, Durakrol, Incorporated, announce two radically new mercury switches. Catalogs for both may be had by signing the coupon on this page.

474. LUSTRABLU GLASS

A new product of the American Glass Company that is the culmination of five years' research work in California and Florida. Windows glazed with Lustrablu add to the beauty of a building outside and within, protect eye-strain, etc., and are especially recommended for schools, offices, hospitals and medico - dental buildings. For detailed information fill in the coupon.

475. WINDOWS

"Perspective Window" is an inven tion of a noted Swedish authority Eric Sigfrid Persson. Improved venti lation, appearance, ease of operatio and increased vision are advantage claimed by its inventor. If interestec in the manufacturer's brochure, fill ir the coupon below.

476. FIBRE TILE

A substitute for ceramic tile, one quarter inch thick, intended for batl rooms, kitchens, wash rooms and rest rooms. Has a smooth, hard, glass-like surface in many colors.

477. STEEL FURNITURE

A new 38 - page catalog, "Simm Steel Furniture and Steel Equipment;" a very complete book of its type beautifully illustrated. Sign the cou pon below if you wish a copy.

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Check items on coupon, paste o letter head or postal card, and mail t Architect and Engineer.

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My Name.....

Name of Company.....

Street.....

City.....State.....

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

ond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.00
3 ply per 1000 ft. roll	6.25
Sisalkraft, 500 ft. roll	5.00
Sash cord com. No. 7	$1.20 per 100 ft.
Sash cord com. No. 8	1.50 per 100 ft.
Sash cord spot No. 7	1.90 per 100 ft.
Sash cord spot No. 8	2.25 per 100 ft.

Sash weights cast iron, $50.00 ton.
Nails, $3.50 base.
Sash weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
City gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

AND—	Bunker	Delivered
River sand	$1.50	$1.90
Lepis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80 and $2.20	
Del Monte white	50c per sack	

EMENT (all brands, common, cloth sacks) $2.72 per bbl. f.o.b. car; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or deliv., 80c per sack. (Less 10c per sack returned, 2% 10th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White — 1 to 100 sacks, $2.00 sack, warehouse or delivery;

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.
(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	2¼x2¼" T&G	⅝x2" T&G	¾x2" Sq.Ed.
Clr. Qtd. Oak	$144.00 M	$122.00 M	$141.00 M
Sel. Qtd. Oak	118.00 M	101.00 M	114.00 M
Clr. Pla. Oak	120.00 M	102.00 M	115.00 M
Sel. Pla. Oak	113.00 M	92.00 M	107.00 M
Clr. Maple	125.00 M	113.00 M	

Wage—Floor layers, $10.00.
Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skyliahts), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron — Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$30.00 per M
No. 2 common	28.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	22.00 per M
1x4 No. 2 flooring VG	58.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	70.00 per M
Slash grain—	
1x4 No. 2 flooring	$45.00 per M
1x4 No. 3 flooring	42.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M
Shingles (add cartage to price quoted)—	
Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.10 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded)	
5/16" 3-ply and 48"x96"	$32.50 per M
"Plywall" (wallboard grade)—	
¼" 3-ply 48"x96"	$37.50 per M
"Plyform" (concrete form grade)—	
⅝" 5-ply 48"x96"	$110.00 per M
Exterior Plywood Siding—	
7/16" 5-ply Fir	$ 90.00 per M
Redwood (Rustic)	85.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $100.00 per 1000 (delivered).

Double hung box window frames, average, with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high, per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot. Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M.

For smaller work average, $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work	per yard 42c
Three-coat work	per yard 60c
Cold water painting	per yard 10c
Whitewashing	per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.50
2 coats, lime mortar hard finish, wood lath	.85
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	.90
Ceilings with ¾ hot roll channels metal lath plastered	1.80
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.30
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.40
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50

Wood lath, $5.50 to $6.50 per 1000.

2.5-lb. metal lath (dipped)	.19
2.5-lb. metal lath (galvanized)	.21
3.4-lb. metal lath (dipped)	.22
3.4-lb. metal lath (galvanized)	.24

¾-inch hot roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations.
$13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.60 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—

From $70.00 per fixture up, according to grade, quantity and runs.

Roofing—

"Standard" tar and gravel, $6.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $6.50 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Cooper, $16.50 to $18.00 per sq. in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ... 8.00 Square
5/8 x 16"—#1 Cedar Shingles, 5" Exposure ... 9.00 Square
4/2 #1-24" Royal Shingles, 7½" Exposure ... 9.50 Square
Re-coat with Gravel, $3 per sq.
Asbestos Shingles, $15 to $25 per sq. laid.
Slate, from $25.00 per sq., according to color and thickness.
1/2 x 25" Resawn Cedar Shakes, 10" Exposure ... 10.50
3/4 x 25" Resawn Cedar Shakes, 10" Exposure ... 11.50
1 x 25" Resawn Cedar Shakes, 10" Exposure ... 12.50
Above prices are for shakes in place.

Sheet Metal—

Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)

Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural

$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—

$80.00 to $120.00 per ton, set.

Stone—

Granite, average, $6.50 cu. foot in place
Sandstone, average Blue, $4.00, Boise $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.—(See Dealers)

Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—

40c per square foot and up. Installation extra.

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CRAFT	Journeymen Mechanics
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*Bricklayers' Hodcarriers	7.50
Cabinet Workers (outside)	10.00
Caisson Workers (Open)	8.80
Carpenters	10.00
Cement Finishers	10.00
Electricians	11.00
Elevator Constructors	12.00
Engineers (Portable and Hoisting)	10.00
Glass Workers	9.68
‡Housesmiths, Ornamental Iron (Shop and Outside)	10.00
Housesmiths, Reinf. or Rodmen	10.50
Ironworkers (Bridge and Structural—Engineers)	12.80
Laborers (Building and Common)	6.50
*Lathers	9.60
Marble Setters	10.50
Millwrights	10.00
Mosaic and Terrazzo Workers	8.00
†Painters	8.75
Pile Drivers and Wharf Builders	11.20
Pile Drivers Engineers	12.80
*Plasterers	10.00
*Plasterers (Hodcarriers)	8.40
Plumbers	11.20
Roofers	10.00
Sheet Metal Workers	10.00
Sprinkler Fitters	11.00
Steamfitters	11.00
Stair Builders	10.00
Stone Cutters	9.00
*Stone Setters	10.50
Tile Setters	11.00
Welders, Structural Steel Frame on Buildings	12.80
§Dump Truck Drivers, 2 yards or less	7.00
§Dump Truck Drivers, 3 yards	7.5
§Dump Truck Drivers, 4 yards	8.0
§Dump Truck Drivers, 5 yards	8.0
§Dump Truck Drivers, 6 yards	8.5
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	8.0
3 yards	8.5
4 and 5 yards	9.1
6 yards	9.7

EXPLANATION:

*—6 Hour Day.
†—7 Hour Day.
‡—Term "Architectural Iron" no long used. This craft "Ornamental Ironworker."
§—Dump Truck Drivers work 7 HOUR ON PUBLIC WORK, 8 HOURS ON PRIVATE WORK; starting time 7:30 A.M.

Private Architects Get Run Around in New Federal Work

IT looks like the "same old story" in the matter of private architectural commissions in connection with the National Defense Program. Most of the work is to be done by the regular drafting departments of both Army and Navy or the Procurement Division of the Treasury Department. The following is the official statement of Federal Administrator John M. Carmody:

"The Army has allocated $45,762,500 of its allotment from the $100,000,000 appropriation for defense housing projects to the Federal Works Administration and I have assigned the planning and construction of the projects to the Public Buildings Administration (the old Procurement Division of the Treasury Department).

"The allocation, which will provide a minimum of 13,000 dwelling units, was made after the Secretary of War had requested the Federal Works Agency to carry out the program under the Army's share of the $100,000,000 provided for defense housing in the second supplemental national defense appropriation act.

"A total of 70 projects has been designated to date. Projects will be constructed under the direction of Public Buildings Commissioner W. E. Reynolds, and the first 70 will be located in 28 states, Hawaii and Puerto Rico. Construction contracts will be negotiated under the cost-plus-limited-fixed-fee provisions set up in the Act (Public 781).

"Eight projects, consisting of 1,950 dwelling units, will be for occupancy by civilian defense workers, and the balance for married Army personnel.

"Rentals for dwellings on Army posts will be fixed by the Army. Rentals for dwelling units off Army posts will be fixed by the Army and Federal Works Agency.

"Sites for 19 of the projects are already owned by the Army. The remaining sites are to be acquired by the Public Buildings Administration. In anticipation of the program, field representatives of the Public Buildings Administration have been making preliminary site explorations in localities where sites are to be purchased.

"Congress established a maximum average cost per dwelling unit of $3,500, including land, utilities and services. The projects included in this program are based on this average, but the Federal Works Agency intends to provide appropriate housing at the lowest feasible cost, with the expectation of bringing this average cost well under the statutory maximum.

"Our success in effecting low costs and the order in which projects will be undertaken will depend on reasonable land and material prices.

"It will be extremely unfortunate if land-owners or material suppliers should take advantage of the shortage of housing to hold up the defense program.

"The average unit will consist of living-room, combination dining-room and kitchenette, two bedrooms and bath. Equipment will include refrigeration and cooking facilities."

The allocations of the $150,000,000 defense housing appropriation have not been announced. Where the housing is to go is determined by the President, and it is to be provided under the direction of the Federal Works Administrator, who is given authority to utilize any Federal agency or local authority, or private architects and engineers, to perform the planning and other services. In Washington it is generally expected that Mr. Carmody will direct the Public Buildings Administration to provide all, or at least the major portion, of this housing.

It is further learned that Rear Admiral Ben Morrell, head of the Navy Bureau of Yards and Docks, has just declared that private architects, engineers and landscape architects will not be employed on the housing which the Navy will produce from its share of the $100,000,000 appropriation.

This conclusion, if carried out, plus a determination by Public Buildings Administration to do all its housing design work in its Washington bureau, says Edwin Bergstrom, President of the American Institute of Architects, will practically shut out the design professions from participating in the defense housing program.

RECORD ILLUSTRATES LOCAL WORK

The last number of Architectural Record devoted considerable space to illustrating two architectural features, both of which were first shown in Architect and Engineer several months back. Four pages were given to illustrating and describing the Telesis Exhibition in San Francisco, and as many more pages were consumed to illustrate the recently completed Oakdale Union School, designed by Frank Mayo and Eric W. Johnson of Stockton.

NEWTON CALLED TO THE COLORS

Henry Carlton Newton, architect of Los Angeles, whose recent work was shown in Architect and Engineer a few months ago, receiving wide praise, has been ordered to do active military service at Fort Benning, Georgia, with a commission of lieutenant-colonel of infantry.

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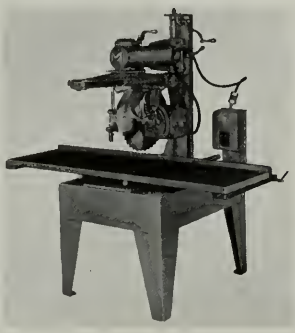

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ENGINEERS ON THE QUI VIVE

These are busy times for engineers, both civil and structural, what with annual conventions, dinners, business meetings and general activity looking to possible commissions in connection with the Government's preparedness program. Both the Army and Navy authorities have been appraised of the capabilities of Pacific Coast engineers to handle plans for some of our defense projects, and in this movement the engineers have the support of the Chamber of Commerce. But to date the number of actual commissions has been almost nil.

There has been considerable talk of preparing a new map of the San Francisco Bay Area for use of the Army and Navy, and the engineers committee, which has this matter in hand, reports that the plan has also been taken up with the state engineer in an effort to obtain assistance through state appropriations.

San Francisco Section, A.S.C.E., will shortly hold its annual election of officers, and, in anticipation, the following have been named as candidates for office next year: President, James I. Ballard; vice-president, G. E. Arnold; Frank E. Bonner and George D. Whittle; secretary-treasurer, Edward M. Knapil.

The nominating committee is composed of C. T. Wiskocil, H. F. Gray, T. J. Corwin, Jr., and R. G. Wadsworth. The fifth member of the committee, H. H. Hall, gave notice that he would be absent for a protracted period, hence his name does not appear with the other committee members on the report.

San Francisco Section held its eleventh annual convention at the Sequoyah County Club in East Oakland, Saturday, November 2, with a golf tournament in the afternoon and banquet and dancing in the evening. The festivities took on a Hallowe'en atmosphere, with technical discussions limited to pumpkins, broomsticks, ghosts and apple-dunking.

DRAFTSMEN IN DEMAND

The Michigan Society of Architects' publication, under date of October 8, prints the following:

"Through the Bulletin there are several openings for good architectural draftsmen. In fact, they are so much in demand that excellent opportunities can be offered to practicing architects who can spare a part of their time from their own business."

Evidently the National Defense program is creating a shortage of architectural and engineering draftsmen in the East. The effect of this increased building activity has not yet been felt to any extent on the Pacific Coast, where a considerable number of good draftsmen need employment. Those desirous of accepting work in the East may benefit themselves by addressing Talmage C. Hughes, 120 Madison Avenue, Detroit, Michigan.

(According to officers of the S. F. Architectural Club there are few, if any, good draftsmen out of employment in the Bay Region.—Ed.)

MORE HOUSING PROJECTS APPROVED

Acting on the eve of the United States Housing Authority's Third Anniversary, President Roosevelt has approved loan contracts totaling $38,239,000 for 22 low-rent and slum clearance projects for 8,331 low-income families. Presidential sanction of these loans to 13 local housing authorities brings to a total of 156,816 the number of new low-rent homes to be built under the USHA program.

The new loans affecting California are $1,365,000 for a 250-dwelling project in San Francisco and $1,261,000 for two projects totaling 314 dwellings in Los Angeles.

Loans for these two projects were influenced largely by information furnished in the respective local housing authority's application.

Los Angeles

Under previous loan contracts, "Ramona Gardens," 610 dwellings, is about two-thirds completed, and four other projects totaling 1,696 homes are in various stages of planning. Including the 314 dwellings planned for the two latest developments, Los Angeles now has seven projects totaling 2,620 homes under USHA loan contract. The city has 32,138 tenant families living in substandard dwellings because of the lack of decent homes at rents within their means, the local housing authority reported.

The net gain in new dwelling units constructed by private enterprise in Los Angeles during the nine years beginning with 1930 fell 31,465 short of the estimated increase of 89,877 in the city's family population, and comparatively little of the new construction was available to low-income families, the application set out.

One of the projects planned under the loan contract just approved will rehouse 214 families and the other, 100. The dwelling structures will be two-story row houses with equipped kitchens and bathrooms, and each development will have ample provisions for tenant families' social and community space and play areas for the children.

San Francisco

San Francisco's $14,000,000 slum clearance and low-rent housing program has advanced another step with approval of a loan contract for its ninth USHA project.

In its drive to relieve an acute shortage of homes for low-income families, the local housing authority already has "Holly Courts," 118 dwellings, completed and fully occupied. "Sunnydale," 772 dwellings, is more than 60% completed and "Potrero," 469 dwellings, is about 40% finished. Five other projects planned under previous loan contracts will provide a total of 1,126 homes. Including the 250-dwelling project approved recently, San Francisco upon completion of its immediate program will have 2,735 new homes in which to rehouse low-income families now forced to live under slum conditions.

The development planned under the latest loan contract will be made up of five-, six- and seven-story apartment buildings of fireproof construction. The

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kitchens and bathrooms will be equipped, play areas will be provided for the children, and there will be social and community space for the tenant families.

A WPA Real Property Survey has indicated that there are about 59,000 dwellings occupied by San Francisco families who are forced to live under sub-standard housing conditions because of the lack of decent homes at rents which they can afford to pay.

The extent to which private enterprise has failed to provide decent homes for families of small means was emphasized in the local housing authority's application. In the nine years 1930-38, although the population of the city is estimated to have increased by 33,779 families, only 13,847 new dwellings were constructed. Moreover, they were built for the most part in outlying sections at a cost which put them far beyond the low-rental range.

BOOKS OF THE MONTH

Reviewed by E. N. Kierulff

TECHNICAL DRAWING. By M. & S. Giesecke; The Macmillan Co., 60 Fifth Avenue, N. Y. Price $3.00.

For the student architect and the draftsman here is a real text book for the working library. In its pages may be found all the details, hints and admonitions that, if carefully followed, will lead to finished drawings reflecting the best type of workmanship. The volume is well arranged with good type and clear cut illustrations.

ADVENTURES WITH HARDY BULBS. By Louise Beebe Wilder; The Macmillan Company, 60 Fifth Avenue, N. Y. Price $2.50.

To the amateur gardener this book comes as an invaluable guide to follow in setting out bulbs. To the professional it comes as another addition to his shelf of plant books from which he may glean useful information. Mrs. Wilder has had experience with bulbs of all kinds over a period of years and her expert knowledge is reflected in the book. The treatment of daffodils is at this time particularly timely due to the lifting of the quarantine on Narcissus. The space devoted to wild tulips will be found interesting.

PRACTICAL MATHEMATICS. By Hobbs-McKinney-Dalzell; American Technical Society, Chicago, Ill. Price $2.40.

A completely revised edition of this popular work on mathematics. This is an ideal book for beginners and for those who, having forgotten their mathematics, wish to go back and review. It is believed to be one of the easiest volumes to read and understand published on the subject. It covers the field of lesser mathematics from numbers to six-place logarithmic tables.

CONCRETE DESIGN AND CONSTRUCTION. By Gibson and Webb, revised by W. Herbert Gibson; American Technical Society, Chicago, Ill. Price $4.75.

A new and revised edition rewritten from first to last page. Here is contained all the information that can

be desired by one interested in concrete construction, clearly and instructively written. The mathematical processes have been simplified so that advanced calculations have been eliminated. There are ample illustrations, and an appendix in which there are 250 questions and problems. The concrete contractor and the engineer will find this book of great moment in their work.

FACTORY BUILDING

Preliminary plans have been prepared by Eldridge T. Spencer, 369 Pine Street, San Francisco, for a mill building for the Chemurgic Corporation, near Richmond, Contra Costa County, California. Construction will be of reinforced concrete.

L. A. MURAL COMPETITION

The Federal Government announces a competition for mural decoration in the Los Angeles Terminal Annex. Eleven murals in fresco or tempera—the sum of $14,400 is to be paid, which amount must cover complete cost.

Artists wishing to compete must signify their intention by writing to Roland McKinney, Los Angeles Museum, for blue prints and directions. Competition closes December 3, 1940.

SOUTH AMERICAN ARTIST EXHIBIT

An exhibition of paintings by Roberto Berdecio, young Bolivian artist, opened at the San Francisco Museum of Art, November 6. Berdecio is already well-known throughout his native South America and in Mexico, where he met Siqueiros, the Mexican contemporary painter. With Siqueiros, he helped evolve a new painting technique in the application of his colors. Instead of the customary brush or palette knife, Berdecio uses a spray gun to apply paints composed of nitro-cellulose lacquer, rather than the usual oils.

Berdecio has recently completed two large murals in New York City. He is now in California on a Guggenheim Fellowship awarded him last spring. The present show of his works at the San Francisco Museum will be on view through November 24.

HOME FURNISHINGS COMPETITION

A unique competition to select a group of designers capable of creating a useful and beautiful environment for today's living, in terms of furniture, fabrics and lighting, is announced by the Museum of Art, 11 West 53rd Street, New York.

The competition is open to any resident of the United States, except employees of the Museum of Modern Art. All entries must be postmarked not later than midnight, Saturday, January 11, 1941, and must be submitted anonymously as directed in the program of rules and conditions in the competition.

Entry blanks and printed program of rules and conditions will be mailed upon application to the Competition Director: Eliot F. Noyes, Director, Department of Industrial Design, The Museum of Modern Art, 11 West 53rd Street, New York, N. Y.

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RUNNING FIRE

(Continued from Page 1)

The Little Man paused and again waved his cane. "Matrimony," he continued, looking at the faded blonde, "enters into wartime considerations. Moral scruples dictate that we volunteer unless we have others dependent on us. I'm going to ask her to marry me."

The Little Man listed in the direction of the blonde and I hurriedly left, forgetting my change.

• *BIRD DIARY (continued)*

P.M.

5:09 That new seed is good; lots of hemp and poppy seed in it.
5:09½ Good old hemp, even if it is fattening.
5:10 That rape is pretty good, too, but me for the hemp.
5:10½ Tried to sing. No soap. Wonder if I'm catching a cold.
5:11 Gee, that hemp is good.
5:11½ Still hoarse. Sound like a sick sparrow.
5:12 Last moult I had asthma. Maybe still have it.
5:12½ O. K. now. Just a hull. Came off on the old cuttle bone.
5:13 Swell hemp.
5:13½ Gained a gram. Got to lay off the hemp. It's too fattening.
5:14 Fine! Here comes fresh lettuce. O, boy!
5:14½ Can't leave that lettuce alone.
5:15 Bet I'll be up all night.
5:15½ Butler must keep lettuce in that bottle in pantry. He can't leave it alone either.
5:16 Weight back to normal. That lettuce is great stuff. It does the work.
5:16½ Voice O. K. again. I'll show those sparrows.
5:17 Song bully. Two new notes. High, too.
5:17½ Oh—what's the use of singing? She thinks I'm a girl. Calls me her little Mary canary.
5:18 Tried to sing bass. Maybe poppy seed will help. That's he stuff.
5:18½ Got an attack of gout.
5:19 Sang myself sleepy.
5:19½ Stood on other foot. Gout gone.
5:20 Three moults ago had gout until I got a manicure.

• *COLUMNIST CAEN:*

The Nob Hill-billies are still buzzing over the No. 1 architect and his wife who fell asleep during the third act of the opening night opera—and continued to sleep as the audience arose to leave; with her head on his shoulder, a lovely sight to behold, as who didn't.

• *SO CONFUSING:*

Arthur Brown and Fred Meyer are members of the Board of Supervisors—and Arthur Brown and Fred Meyer are widely known S. F. architects: **four different men.**

S. F. MUSEUM OF ART EXHIBITIONS

Paintings by Roberto Berdecio, through Nov. 24.

Fifteenth Annual Exhibition of the San Francisco Society of Women Artists, through Dec. 8.

Thirteen Watercolorists, through Dec. 1.

Memorial Exhibition of Paintings by Rinaldo Cuneo, through Dec. 8.

Drawings by William Zorach, through Dec. 5.

Prize Photographs of the Exposition, General Electric Contest, through Dec. 5.

Paintings by Marian Clark Cooch. through Dec. 1.

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AIR RAID SHELTERS

United States Housing Authority engineers are studying demonstration air raid shelters with a view to possible inclusion in low-rent housing projects.

USHA engineers have discarded the suggestion of reinforced floors above cellars because such construction in Europe has been ineffective. They are now studying two types of "pill boxes" built by the Vacuum Concrete Corporation of New York City for testing by the National Bureau of Standards. One type is oblong with a parabolic cross section tapering towards the top. The other is dome-shaped. The latter should give more protection from gunfire and bomb fragments, USHA engineers say, but no "pill box" so far devised provides much protection from a direct hit by a bomb.

The idea of reinforcing the floor above the cellar was dropped after consultation with Michael Rosenauer, noted British architect, who is visiting USHA projects. Mr. Rosenauer studied air raid shelter in Spain, France and England. In Spain, he says, debris of buildings demolished by bombs frequently blocked entrances to bomb-proof cellars and occupants often were suffocated before they could be removed.

BEST SEPTEMBER SINCE 1929

The September total of contracts awarded in the 37 states east of the Rocky Mountains was the highest recorded for any September since 1929, according to F. W. Dodge Corporation. The dollar volume, amounting to $347,651,000, represented a 7 per cent increase over September 1939. Since publicly-financed construction showed a fractional decline as compared with the corresponding month of last year, this increase was the result of an upswing in private construction which rose from $179,011,000 to $203,655,000.

The rearmament program, bringing with it industrial expansion, was again reflected in the increase in awards for manufacturing building. The volume for this class of construction rose from $20,738,000 in September 1939 to $37,980,000 last month. Commercial

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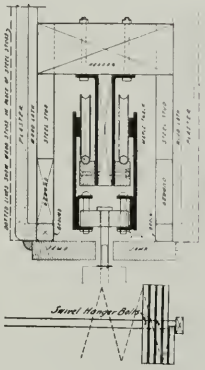

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building, which follows closely the industrial production cycle, also contributed to the 23 per cent increase over September 1939 in contracts awarded for non-residential buildings as a whole.

Residential building, which amounted to $152,372,000 in September, came within one per cent of the August total, which was the highest recorded for any month since July 1929. Awards for one-family dwellings, amounting to $104,822,000, continued to lead all other residential classes. Miscellaneous shelter projects, which include barracks for the armed forces, also contributed to the residential building gain by rising from $2,754,000 in September 1939 to $12,063,000 last month.

LUMBER LITERATURE

A new 52-page catalog listing, illustrating and describing all printed information and literature available from the federated lumber associations affiliated with the National Lumber Manufacturers Association, has lately been published.

Titled Lumber Literature, the booklet contains between 100 and 125 halftone engravings and line drawings illustrative of the hundreds of publications described. The book itself is divided into sections, one of which is devoted to heavy construction; another to light construction; and a third to miscellaneous subjects. There is also a section, alphabetically arranged, of all affiliated associations and the publications that may be obtained from each.

Conditions under which the booklets and folders are available differ. Some are distributed gratis, while a nominal charge to cover postage and handling is made for others.

Single copies of Lumber Literature are free and may be obtained by writing the National Lumber Manufacturers Association, 1337 Connecticut Avenue, Washington, D. C., or any of the federated lumber associations.

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FEDERAL RECLAMATION PROJECTS

[From an address by John C. Page, Commissioner, B. of R.]

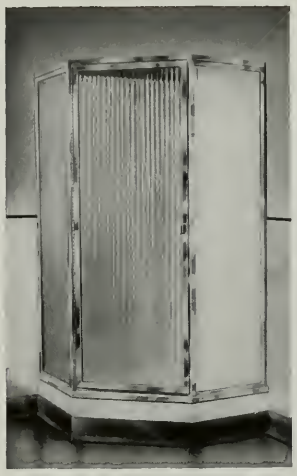
Federal reclamation projects now in operation cost about $250,000,000, and more than 52,000 farm families living on project lands have repaid in excess of $60,000,000. Repayments have gone again into the reclamation fund to be used to construct other projects.

Operating projects water about 4,000,000 acres, and crops valued at more than $100,000,000 are harvested on them each year. They support, in round numbers, 1,000,000 people on farms, and in towns and cities which have grown up among the farms.

In recent years, the reclamation revolving fund has been supplemented by funds made available from the general treasury in order that large projects might be undertaken. The Boulder Canyon Project Act stands as the authority for the appropriation of general funds for the construction of the All-American Canal.

The Yuma Project lies just east of Central Valley, and the Salt River Project surrounds Phoenix in Arizona. The Orland Project lies in Northern California, and there are dozens similarly scattered through these big States which make up the arid third of our country.

The Central Valley Project, now under construction in the San Joaquin and Sacramento River Valleys will rank with the Boulder Canyon Project in magnitude, in the variety of its services to humanity, and in its importance in the agricultural development of its area. Shasta Dam, a concrete structure more massive but not so high as Boulder Dam, will harness the Sacramento River in much the same manner that Boulder Dam has shackled the Colorado. Friant Dam, itself a great engineering work, will control the San Joaquin River. Between these two dams, Shasta and Friant, the waters of Central California for nearly 500 miles will be reapportioned to solve serious water problems, most critical among them the deficiency of water in the rich San Joaquin Valley which will be met by transfer of excess water from the Sacramento River basin.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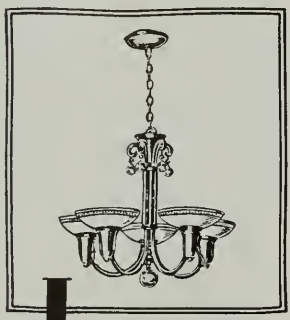

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Projects such as the Central Valley eventually will add to the farming area of the West another 2,500,000 acres, and will, at the same time provide reliable water supplies to as much more land now farmed but inadequately irrigated.

The fundamental purposes of the reclamation program are to provide the opportunities for the establishment of homes and to increase the security of agriculture in this dry region.

Boulder Dam establishes a firm control of the Colorado River at a point below all but two sizable tributaries. Lake Mead is large enough to store the normal flow of the Colorado River for two years, and it now contains sufficient water to supply the usual irrigation demands of the Imperial Valley and all other irrigated sections downstream for more than three years. With this storage capacity—more than 32,000,000 acre-feet—and the reserve which already has been built up, there is little doubt that the water, upon which rests the security of the homes in the Imperial Valley, is now amply assured.

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912 AND MARCH 3, 1933.

Of the Architect and Engineer, published monthly at San Francisco, Calif., for October 1, 1940.

State of California
City and County of San Francisco } SS.

Before me, a notary public in and for the state and county aforesaid, personally appeared L. B. Penhorwood, who, having been duly sworn according to law, deposes and says that she is the Business Manager of The Architect and Engineer, and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management (if daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

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Publisher, The Architect and Engineer, Inc., 68 Post St., San Francisco, Calif.

Editor, Fred W. Jones, 68 Post St., San Francisco, Calif.

Managing Editor—None.

Business Manager, L. B. Penhorwood, 68 Post St., San Francisco, Calif.

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L. B. Penhorwood, Business Mgr.

Sworn to and subscribed before me the 17th day of September, 1940.

(Seal) MARY D. F. HUDSON

Notary Public in and for the City and County of San Francisco, Calif.

(My commission expires Dec. 22, 1940.)

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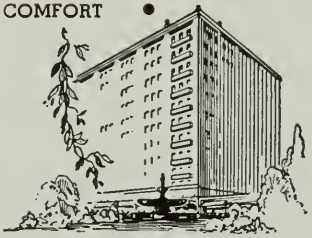

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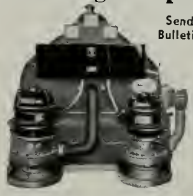

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VIEW DAM FROM NEW POINT

Visitors flocking to the Shasta Dam site in increasing numbers to see the large-scale construction now under way are afforded a spectacular view of the work from a new Vista House opened recently by the United States Bureau of Reclamation.

Construction Engineer Ralph Lowry reported that 500 persons, representing 18 states and one South American country, were registered at the Vista House the first day. The observation facilities, built as a safety measure to accommodate the "dam-conscious" public so that sightseers do not have to enter the immediate construction zone, will be open every day of the year.

The observation point is located on the east side of the Sacramento River Canyon overlooking the great cavity excavated for the dam foundation where concrete is now being poured in blocks on both sides of the river.

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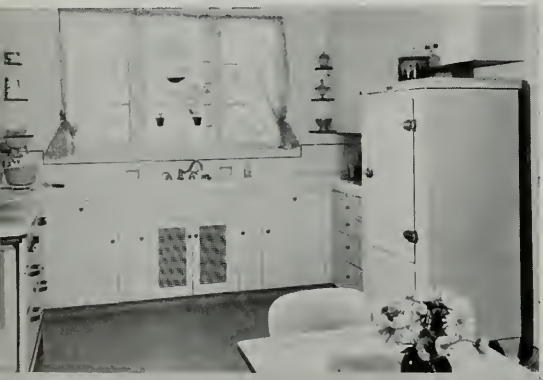

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RUNNING FIRE

By MARK DANIELS

• *LONG ENOUGH*

Greek mythology has contributed much to the beauty of the world. In fantasy and legend, in architecture and ornament, in painting and sculpture, the classic myths have supplied the motif of a large percentage of our masterpieces. The nine muses have given us an extensive symbolism for applied decoration. Tales such as that of the Myrmidons of Oenone have established phrases in our language. Countless other contributions to our present day art might be cited.

While the myth of Pygmalion and Galatea has always appealed strongly to me it has, at the same time, reconciled me to the passing of the Greek gods. It was swell of Aphrodite to give eternal articulate life to the statue that Pygmalion loved almost to madness, and I know a sculptor or two who would sacrifice anything to have the miracle repeated. But, no doubt, things are best as they are for I know a few architects who are also in love with their own creations.

• *OPPOSITES*

For several thousand years the Chinese have embraced in one phrase all things that are opposite to one another—"Yang and Yin." The Yang and Yin are positive and negative, male and female, black and white, good and evil, heaven and earth. We occidentals are slow but we are getting there. We also have coined a phrase that embraces all the opposites as well as does Yang and Yin—CAPITAL AND LABOR.

• *A BREATH OF FRESH AIR*

This is not a book review; nor is it written because the author's surname is Daniels; nor is it written because I knew him 28 years ago when he was Secretary of the Navy and I was a sort of errand boy for Secretary of the Interior, Franklin K. Lane. It is written, as other items in this column are written, because I feel that way about it. The book is like a breath of fresh air.

In these days of biographical floods covering the lives of all sorts of people from the most popular prostitute in Podunk to the sainted sister of Silenus, an evening spent reading "Tar Heel Editor" by Josephus Daniels is like smelling ripe apples after an hour in an abattoir.

• *QUAINT CUSTOMS*

The national pet in China is birds. They carry them in cages to work. Often the first thing a carpenter will do on a job is hang up his bird. The first thing an American laborer does on a job is hang up his bomb.

• *DON'T HOARD*

There are some architects and other professional men who consciously or unconsciously try to hoard ideas. In the practice of architecture it is not only bad form but a dangerous habit.

By hoarding ideas I mean leaving a good scheme out of one plan and saving it for a bigger job, if one comes along. Every idea that comes to a designer while on a plan should be exhausted on that plan. Otherwise bad mental habits are formed and designing takes on the additional problem of deciding whether the job is good enough for the idea.

I know a writer who was once a successful author. His forte was character delineation by dialogue. He told me that his characters actually lived for him. He became so fond of them that he began to take some of the best lines away from one character and give them to another that he liked better. Then he developed a sort of personal jealousy until he finally took the best lines away from his almost famous characters and tried to publish them in the form of his own commentaries. He had become jealous of the reparteé and brilliancies of his creations. They were stealing **his** thunder. Well, he hoarded his ideas while on one job but when he came to use them on another they wouldn't fit.

• *NOTHING IS ORIGINAL*

About 2500 years before the time of Christ, Emperor Yao thought it was time that people got back to work again. For centuries they had been reading the Bamboo Books, playing fantan and ringing door bells, so he decided to teach them something new and more useful.

There were two brothers named Hi and two named Ho who, although they were necromancers, actually liked to work. Yao called them in and said, "You His and Hos beat it North, South, East and West and bring us back the dope on how to cultivate the soil according to the four seasons."

So Hi and Ho, early in the morning, with their picks and shovels on their shoulders, filed out of Yao's office.

Heigh-ho! Heigh-ho! even Disney and the seven dwarfs couldn't be original.

• *THE LITTLE MAN*

Hanging his wet umbrella on the bar rail, the Little Man frantically grabbed his nose in a colored handkerchief and exploded with a sneeze that would have done justice to a man twice his size. His "God bless you," was more like a challenge than an apology as he crowded up to the bar. Still blowing his red nose in the red handkerchief, he continued belligerently, "May sound silly to you to say 'God bless you' after sneezing. It's nothing of the sort. It's a time honored custom. The Jewish rabbis of biblical days used the expression. Pliny, Homer, Aristotle and Apuleius mention it. The custom is observed in Florida, Koordistan, Otaheite, the Tonga Islands and by Sam Blythe. It may have been an apology at one time but now it is an honored custom amongst the intelligentsia. Other countries have different rituals for the sneeze. In India when you sneeze your immediate neighbor says 'Live' and you reply 'With God.' I'll admit that sounds silly. God is lugged far enough into the disgusting act of sneezing by a mild 'God bless you,' and I, personally, am content with the practice of my forbears, aided and abetted

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ARCHITECT AND ENGINEER

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A PAGE OF NEWS AND COMMENT FOR ART LOVERS

WOMEN ARTISTS' EXHIBITION

An invitational preview opened the 15th Annual Exhibition of women artists at the San Francisco Museum of Art last month. Over 200 works by 78 artists were exhibited, including oils, watercolors, drawings, prints and sculpture. The crafts were well represented in ceramics, bookbinding, jewelry and fabrics. The Jury of Awards, composed of Helen Bruton, Lucien Labaudt and Hamilton Wolf, gave first prize of $100 for the best piece of work in the exhibition to Ruth Cravath Wakefield for her stone sculpture, "Work Horse." The President's Purchase Prize of $50 was won by Helen Dunham for her untitled oil painting. Peter Fahey received the Decorative Arts Prize of $50 for her bookbinding and Claire Falkenstein and Margaret Cavaney both received Honorable Mention, the former for her wood sculpture, "Blue Figure," and Miss Cavaney for her oil painting, "Useful Old."

ARCHITECTURAL EXHIBIT

We hear flattering comments of art student work at the University of California at Los Angeles. With an enrollment this year of 334 the school is developing some formidable talent that promises to catch the public eye. Last month an exhibition of architectural drawings in the Education Building attracted a considerable number of art loving people who were thrilled not only by the students' work but by a fine collection of architectural drawings by such internationally famous architects as Frank Lloyd Wright and Richard J. Neutra.

The whole formed a most interesting display, particularly that part of the exhibition that emphasized the modern trend. It proved one thing at least—that modern design is being worked around to a point where it fits domestic architecture—where a home may be functional and at tthe same time be livable—which was not the case when some of our functionalists first started the movement. "And when architecture gets into the home it has gotten into the home, which is a mighty good place for it."

This Los Angeles Exhibition impresses one with the realization that contemporary education has been placed properly to coincide with contemporary life. And as a result there will be, no doubt, few if any classical scholars, few pinnacles of distinguished intellects; but large-scale higher education will appreciably raise the general cultural standard, and that, after all, is what the democratic system sets out to do.

CHILDREN'S CHRISTMAS PARTY

Five hundred children made merry at the annual Children's Christmas party at the San Francisco Museum of Art, Saturday, December 14. Children attending the Museum's Saturday morning art classes, their parents and friends were among the invited.

In addition to a Christmas tree, Santa Claus, refreshments and entertainment—all held in the Museum's galleries—a special exhibition of selected paintings, drawings and clay modelling by children in the art groups was formally opened and the show will continue until the end of the month.

NATIONAL ART WEEK

Our own art is making this world brighter and more interesting, so it would appear from a reaction of the recent celebration of National Art Week. In observance of the week in San Francisco the city's varied art groups combined efforts in staging a main exhibit of local art work in the Palace Hotel. Mayor Rossi, referring to the celebration, said that "San Francisco has a long and brilliant tradition in the field of art, both as a center of creation and of appreciation."

The Palace Hotel exhibit was arranged by Beatrice Judd Ryan and was made up largely of representative works by Northern California artists, comprising prints, oils, sculpture, crafts and mosaics. Many department stores also devoted windows to the theme of modern American art.

Art Week may become an annual observance if President Roosevelt's suggestion is followed. In a public statement the President said that the first Art Week had achieved such "gratifying success" that he felt justified in recommending the creation on a permanent basis of a national council for Art Week.

MORE 1-MAN SHOWS

A one-man show of Brazilian water colors attracted some interest in the Bay Region the past month. The exhibit was held in the office of the Consulate General of Brazil, 625 Market Street, San Francisco, by Cymbelino de Freitas, well-known Brazilian water colorist.

De Freitas was formerly a professor of art in Sao Paulo, his native state, and served for a time as supervisor of education in Brazil. He is a member of the Brazilian Society of Fine Arts and of the Brazil-United States Institute, an organization devoted to furthering friendship between the two countries.

His watercolors are landscapes of Rio de Janeiro and Carioca, also a Brazilian State, hitherto known to us mainly through a vague association with a type of dance music like the rhumba. It is depicted by De Freitas in tropical splendor full of mango and banana trees and Spanish churches.

The Brazilian artist expressed the hope that his paintings, with their warm colors and atmospheric suggestions, would incite an irrepressible desire among our citizenry to pay an early visit to Rio and its surrounding country.

Another one-man show consisting of paintings by the late Rinaldo Cuneo, whose way with landscape, rich in balanced movement and in color, is well known, was held in November at the San Francisco Museum of Art. Other shows of the month included drawings and water colors by John Carroll in the Schaeffer Galleries and an exhibition of paintings by the late Andree Rexroth in the United American Artists Gallery at 271 Columbus Avenue, San Francisco.

FRENCH PAINTINGS

The French paintings (120 masterpieces) referred to in these columns last month, have finally reached San Francisco after being held up by the Federal authorities in New York, and are now at the deYoung Museum in Golden Gate Park. It is the first time these rare oils have been shown in the United States, and the fact that San Francisco was given preference over Eastern cities, speaks well for her reputation as an art loving community. The Metropolitan Museum is reported to have made a spirited fight for first showing of the pictures.

The show contains outstanding paintings of practically every important French artist from the time of the French Revolution to the present day. It is worth your time to see it.

"ONE MAN" WOMAN'S SHOW

One of California's first women artists to take up the charcoal medium and make a success of it is Gene Francis of Pebble Beach, who has won new admirers with her "one man" show this month at the California Palace of the Legion of Honor. Gene Francis is the widow of Francis McComas, who was responsible for her early training in charcoal. The current exhibition includes some twenty-four charcoal drawings of landscapes and character studies reflecting the artist's observations in Mexico, Tahiti and California.

FEDERAL COMPETITIONS

Departments of the Federal Government are calling for competitive bids for the following:

Mural Painting. Fresco or tempera mural to be placed in the War Department Building, Washington, D. C. Mural space is fifty feet wide by twelve feet high. Scale design —one inch equals one foot—to be submitted in full color. Also full size detail of the design—two feet square. Designs must be submitted by April 1, 1941. Award, $12,000, to cover all costs. Send for further details and blue prints to Section of Fine Arts, Washington, D. C.

The Section of Fine Arts, Public Buildings Administration, Federal Works Agency, Washington, D. C., invites competition for 200 water colors for the Carville, Louisiana, Marine Hospital—for which a total of $6,000 will be paid by the Government. There are 16 buildings for patients and the water colors will decorate 32 sitting rooms in these buildings and four vocational rooms.

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ENGLAND'S FAITH IN HER FUTURE REFLECTED IN BUILDING

DESPITE the frequent bombing of London and other English cities, building activity has by no means come to a stop over there, although much of the building at present is centralized in air raid shelters. Some of these are assembled from stock plans while others (brick and concrete) are built to answer the particular needs of certain localities. A number of important civic structures, started at the beginning, or just prior to the outbreak of the war, have been completed and, as will be noted from the photographs, they represent a type of better than average.

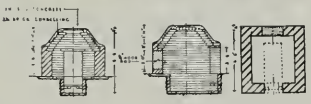
The shortage of timber in England is particularly acute and domination of the Scandinavian countries is in no wise helping the situation.

To enable vital building problems to be carried on, the British Cement and Concrete Association has carried out research which has resulted in the building illustrated.

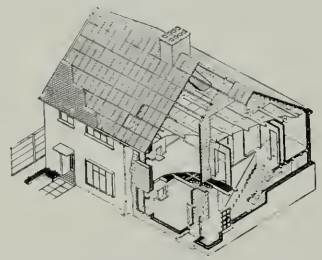
A number of British local authorities have already decided to continue, and in some cases even extend, their pre-war building programs.

The problems created by the need to conserve timber and metal proved a stumbling block to a greater or lesser degree until they were met by the utilization of concrete or cement asbestos.

Those items which were hitherto made of wood or cast iron are shown in the form of precast units. Two main features of construction are affected by the characteristics of these units. First, in view of the extra weight of concrete load-bearing partitions in the upper stories, the inner leaves of the cavity walls must be designed accordingly, but the usual design for foundations is adequate in normal cases. Secondly, since precast units cannot be cut to length to suit site dimensions or adjusted to rectify errors in workmanship, the successful use of the units depends on standardization in planning and precision construction.



A. R. P. SHELTERS IN BRICK. APPROVED BY BRITISH MINISTRY OF HOME SECURITY



A TWO FAMILY HOUSE, POPULAR IN ENGLAND TODAY, BUILT OF PRE-CAST CONCRETE OR CEMENT ASBESTOS

Air-Raid Shelters

A great saving of labor and materials is obtained in two of the types in excavating only for foot space as shown in the sections reproduced and utilizing the two side unexcavated sections as seats. However, the two most vital recommendations for this type of shelter are that no steel is used either for structural or reinforcing purposes, and second, no timber at all is required, not even for form work, since these two materials are almost as valuable as gold in England at the present time.

The roofs are of three types, brick corbelling with the final 18-in. gap bridged by a small concrete slab; straight interlocking concrete units (of which two are shown in the lower photograph) and semi-circular concrete units. All three roofs are finished with about 4-in. of concrete.

The emergency exists are ingenious, consisting of brickwork, "panel," in the external walls measuring about 2 ft. x 2 ft. 3 in. which bonds with the rest of the wall but is laid in dry sand, finally being pointed in lime mortar. A 15-in. flat iron hook is built into the panel with its upturn behind a header, so that with a good pull the header comes out and the rest of the panel can then be picked to pieces with the hook. Such a panel is visible in the lower photograph.

The shelters are each designed for six persons and are said to cost between 14 pounds and 18 pounds each, according to type and locality.

All the roofs have been tested by having debris dropped on them, and have stood up well under the weight. In fact, so satisfactory have they proved that it is understood that such shelters, grouped in multiple units, are to be used for communal shelters in streets and elsewhere.

Sir John Anderson, M.P., British Home Secretary, has announced in a written answer that 2,236,000 steel shelters have been delivered and instructions have been given for the delivery of a further 50,000. These will accommodate about 11,500,000 people. The small number of local authorities who will now have to forgo supplies of steel shelters will be provided with alternative types of brick-and-concrete shelters.

(Turn to Page 10)

BUILDING FOR THE LEICESTER EVENING MAIL

INDUSTRIAL PLANT FOR F. BENDER & CO., LTD., ELSTREE WAY

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SCHOOL AT CRANFORD PARK, MIDDLESEX

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Here's an arrangement of 3-panel plate glass mirrors that would delight any woman—and is modest in cost. The center panel between the closet doors is a full-length mirror. The partial-length mirrors on the doors afford ample angle views.

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ENGLAND BUILDS ON

(Continued from Page 6)

Architects in the U. S. are manifesting concern over the appalling damage to many structures of architectural renown in English cities. Yet in spite of this terrible devastation, many notable structures, both public and private, completed in recent months, are still standing unharmed. Reproduced

BRIXTON POLICE STATION

here from the pages of Building, an Australian architectural magazine, are a few notable examples of late architecture in Britain.

ARCHITECTURE

(From the University of Illinois Bulletin)

Architecture is one of the world's oldest professions. Since man began to build shelters, the builder—or architect—has been needed, and down through the ages his work has been an important factor in civilization. Architects with adequate training assume a commanding position in society.

The business of the architect is to conceive, design, and superintend the construction of buildings of any character, from the smallest to the largest, including housing, churches, schools, hospitals, hotels, factories, office buildings, etc. While architecture is in a sense a fine art, the architect must understand not only the principles of design but also the procedure of construction. He must be conversant with the physical characteristics of materials used in construction and be able to manage business affairs for his client. He must have a working knowledge of the equipment and appliances for lighting, plumbing, heating, and ventilating, and the many other mechanical contrivances which go into modern buildings. The training of the student therefore should be partly artistic, partly scientific, partly commercial.

With one exception the University of Illinois is the oldest school of architecture in the United States.

SEEMS UNBELIEVABLE

Of the 500 registered architects now residing in the Northern Section of California less than half are practicing under their own name. Of the 34 architects registered in Sacramento, only four are listed in the directory. In the Sacramento area the Federal Housing Authority, in the last two years had over 5,000 new homes approved for construction. Of this number the architectural profession prepared plans for twenty-two. In one area over 150 homes costing from $8,500 to $25,000 were constructed. Of this group nine were handled by architects.—From the annual report of the Public Relations Committee, State Association of California Architects, Northern Section.

PROFESSION IN JEOPARDY

The following letter has been sent out to every registered architect in Michigan by the Michigan Society of Architects, outlining the problems that confront the profession in that state and inviting financial aid to help carry on a definite program of activity:

Dear Sir:

The MSA Board of Directors has long known of the need for steps to safeguard the interests of the architectural profession. In this effort a definite program of activity has been formulated, and is proceeding vigorously. Matters vitally affecting the profession, such as publicity to inform the building public correctly, legislation to guard the profession's interest, active participation in civic and public affairs, cooperation with the building industry, cooperative service to the building public, guiding architectural practice, affiliation with the American Institute of Architects, increase in active membership, and many other constructive activities are engaging the attention of the Board and the various committees.

One of the most serious problems confronting the profession today, which has occupied the attention of the Board for some time, is the intrusion of building organizations rendering architectural services, into our professional field. This illegal, competitive practice must be stopped in the interest of every architect and the Board has decided on measures to combat it.

In the first place an extensive publicity campaign will be made. Special communications will be sent to the officials of every business, industrial and commercial firm in Michigan, also to public officials and newspaper editors throughout the state. Newspaper and radio publicity will also be used. Secondly, cases against offending firms will be prepared; prosecuted in the courts. If our state registration act is found deficient, it will be strengthened.

Obviously, to carry out this program will require the active cooperation of every registered architect in Michigan. The small dues in our Society make it impracticable to carry on such a program without financial assistance. We must have your help. A return postcard is enclosed, and we ask you and every registered architect to sign and return it immediately.

Yours hopefully,
W. Gamber,
Pres., Mich. Society of Architects

N. Y. SUN QUOTES FROM A. & E.

The New York Sun, date of November 9, reprints from an article by R. W. Sexton in the Architect and Engineer the following, under the caption, "Functionalism Charged With Lack of Beauty":

Reflecting a demand in the West for something more than just utility, Architect & Engineer (San Francisco) says in a recent issue: "You may have in your office a table. It is a purely commercial piece of furniture, well suited to its purpose. You do not criticize it. But how would that table look in your living room? In your home, where you are not engrossed in business matters, you expect a piece of furniture like a table to be beautiful as well as practical. Surely the details of this table need refining to make it appropriate as a piece of living room furniture. It needs a little art, a little beauty which bare functionalism lacks."

A.I.A. AND FEDERAL COMPETITIONS

An analysis of Regional Competitions, to date, by an interested New York architect shows that relatively few members of the A.I.A. have troubled to compete in the design of Post Offices—although the success of those Institute members who HAVE entered is more than encouraging. The facts are as follows:

There are 196 A.I.A. members in Region No. 8 but only 12 entered the Leavenworth Post Office Competition. There were 25 entrants in all and the First Prize and two of the four Honorable Mentions went to A.I.A. members.

There are 559 A.I.A. members in Region No. 7 but only 20 entered the Evansville Post Office Competition. There were 78 entrants in all and the First Prize and two of the four Honorable Mentions went to A.I.A. members.

There are 263 A.I.A. members in Region No. 1 but only 19 entered the Montpelier Post Office Competion. There were 74 entrants in all and the First Prize and two of the four Honorable Mentions went to A.I.A. members.

There are 233 members of the A.I.A. in Region No. 11, but only 35 of these entered the Burlingame Post Office Competition. There were 131 entrants in all and one of the five Honorable Mentions went to an A.I.A. member.

There are 109 members of the A.I.A. in Region No. 3, but only 31 entered the Jamestown Post Office Competition. There were 7 entrants in all and in this competition alone Prizes and Honorable Mentions went to competitors who are not members of the A.I.A.

In the National Competitions, A.I.A. participation is a little more encouraging—as it well might be, judging the prize awards. For instance, 75 of the 208 entrants in the Covington Post Office and Court House Competition were A.I.A. members and the First Prize and two of the four Honorable Mentions were won by Institute members.—Pencil Points.

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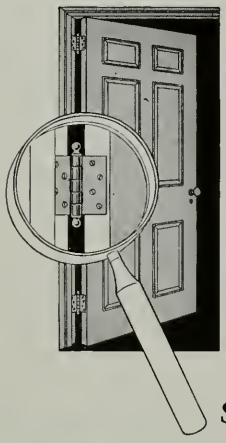

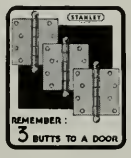

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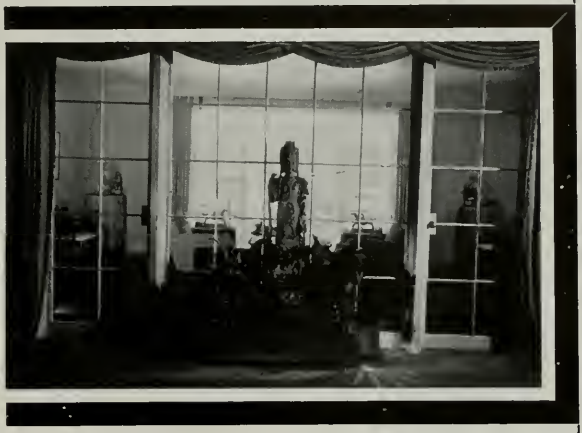

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Program Issued January 4, 1941
Date of Submission February 17, 1941
Judgment, March 8, 1941

This prize is for a problem on illumination as related to architectural design and is awarded on the Class A III Problem "A Club Swimming Pool."

Students in any university may enter this competition with certain restrictions:

1. If they are in a school taking regular Beaux-Arts Problems, they are already classified as Class C, B or A students, Class A being the highest grade, and only Class A students are eligible to take this problem.
2. If they are in a school not regularly taking our problems, they are free to enter this competition by registering for a single problem and paying the $2.50 registration fee to the Beaux-Arts Institute of Design, before the problem is issued. No programs will be sent unless the fees have been received in advance. Since these students are competing with the highest grade in other schools it would be advisable to have the upper classmen only enter the competition. The programs will be sent to the Supervisor of the Architectural Department, who will distribute them to the students, registered.

The winner is awarded a prize of $300, the student placed second $200, and the student placed third $100.
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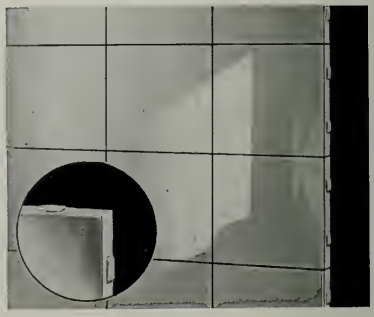

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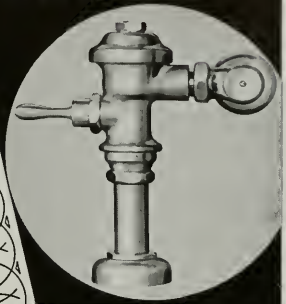

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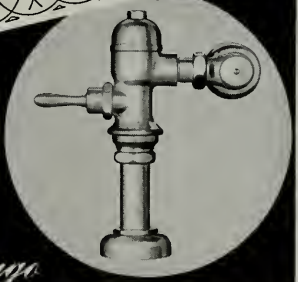

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TWELVE STORY OFFICE BUILDING FOR BANK OF AMERICA, SAN FRANCISCO
Structure, now being erected at Montgomery and Pine Streets, will be the Bank's Executive Headquarters.

Photo by Roger Sturtevant

FRONT, DEER VALLEY UNION SCHOOL, BRENTWOOD, CALIFORNIA
Frederick H. Reimers, Architect

BRENTWOOD SCHOOL

DESIGNED TO RESIST 'QUAKES

THE Brentwood Deer Valley Union School in San Joaquin County, California, was remodeled and rebuilt to meet the latest earthquake requirements of the State of California. The architectural development and solution were simple and direct. Exit doors were purposely placed to eliminate hazards of panic and provide easy circulation. Two severe earthquake shocks have been experienced in this locality since remodeling and the building withstood the tremors without showing any visible cracks or displacements.

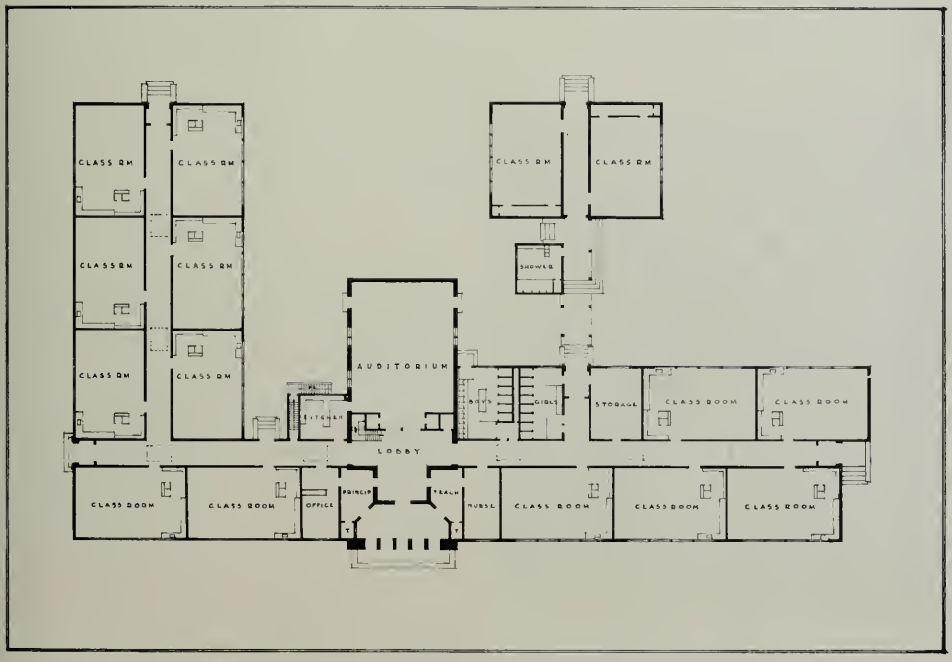
The auditorium, lobby and vestibule are of concrete and granite trim over tile, while the left and right wings are wood frame construction. Features of the interior walls are veneer panels in the halls and under the blackboards in class rooms, to withstand abuse, and the use of fireboard on ceilings and the upper part of walls to give acoustical values. The floors are covered with linoleum throughout.

DETAIL OF CENTRAL PAVILION, DEER VALLEY UNION SCHOOL, BRENTWOOD

Faced with Tan Plastic cement

Frederick H. Reimers, Architect

STREET ENTRANCE TO CLASS ROOM UNIT, DEER VALLEY UNION SCHOOL, BRENTWOOD, CALIFORNIA



PLAN, DEER VALLEY UNION SCHOOL, BRENTWOOD, CALIFORNIA

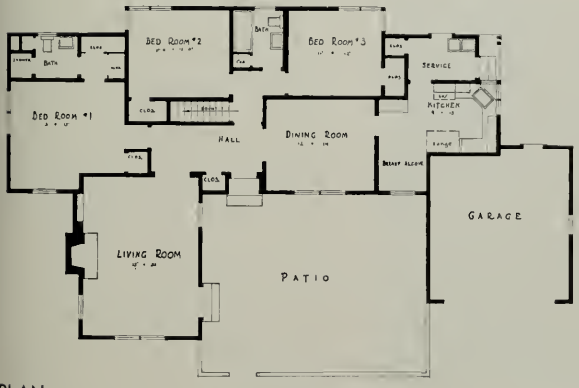
KINDERGARTEN

A CLASS ROOM CORRIDOR
NOTE NATURAL AND ARTIFICIAL LIGHTING IN CEILING.

MOST OF THE ROOMS, INCLUDING CORRIDORS, HAVE CELOTEX CEILINGS AND PLYWOOD WALLS.

Courtesy of Housing

HOUSE IN PALO ALTO, CALIFORNIA
Leo J. Sharps, Architect



PLAN

CONSTRUCTION OUTLINE

FOUNDATION—Concrete

EXTERIOR SURFACE AND ROOF—Cedar Shingles

SHEET METAL AND HEATING—Gas Furnace

FLOORS—Oak

KITCHEN FLOOR—Linoleum

BATH FLOOR—Linoleum

BATH WALLS—Linoleum

LIGHTING—Indirect and Wall

CABINETS AND MILLWORK—Pacific Mfg. Co.

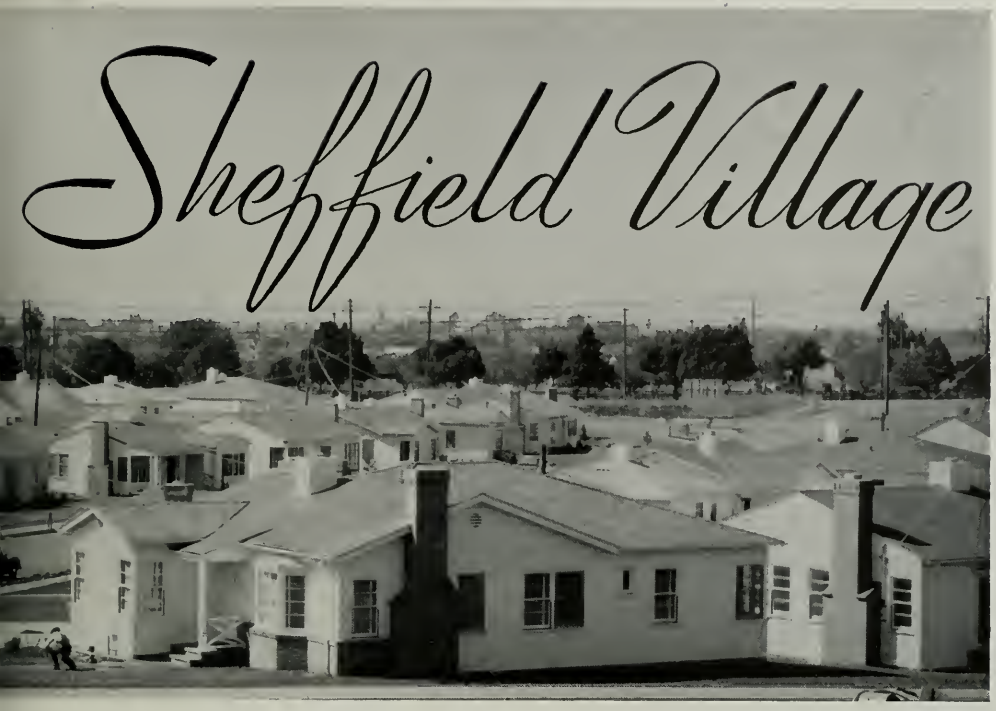
A WELL planned and amazingly successful home development project involving an expenditure in excess of $1,500,000, is fast nearing the half way mark in a beautiful rolling foothill section of Oakland, California.

Making the best possible use of a scenic 98 acre tract, 315 generous size lots, nothing under 5000 square feet in area, were laid out one and a half years ago on broad winding streets, ample provision being made for school and business sites, parkways and recreational areas. These latter include a picnic site with tables on a wooded stream; horseshoe courts; "The Corral" (a barbecue pit); and work starts early in 1941 on tennis, badminton and volley ball courts as well as a fully equipped playground. All of these fine assets will be owned by the property owners of Sheffield Village, the attractive name given this new tract, and will be administered by them through their Home Owners Association, a non-profit corporation set up for the purpose.

AIR PLANE VIEW OF THE VILLAGE

Carefully drawn up, high restrictions running for 40 years,

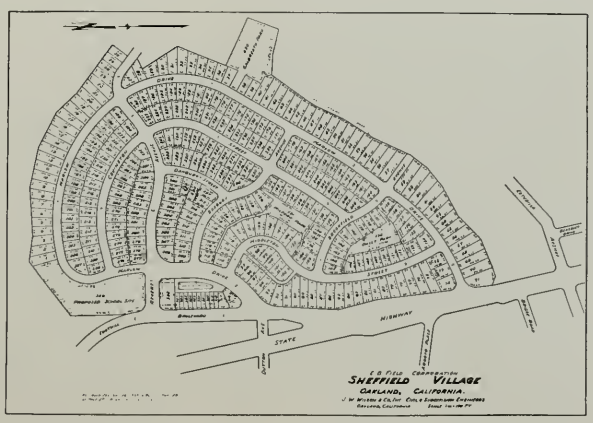
Sheffield Village



govern all building in the tract, and a wide choice of architectural design is offered the prospective purchaser. Under the supervision of Theodore N. Thompson, A.I.A., the mass building program was broken down into an amazingly diverse selection of attractive exteriors. It actually takes a trained eye to detect where repetitions are made. In fact many of the new owners have not yet discovered in what respect their homes are similar to others in the village. In the first completed 100 home unit are English, French, Modern Colonial, Spanish and Monterey architectural styles. The next unit of 64 homes, the first of which are already nearing completion under Irwin Johnson, A. I. A., will include homes of Ranch House design, Colonial and Early California.

One feature of the sponsor's plan (E. B. Field Corporation) which many people have liked, is the fact that anyone can make his own selection of color scheme, paint and wallpaper when purchase is made early enough in the building program.

The accompanying photographs show a few of the exterior designs which have been

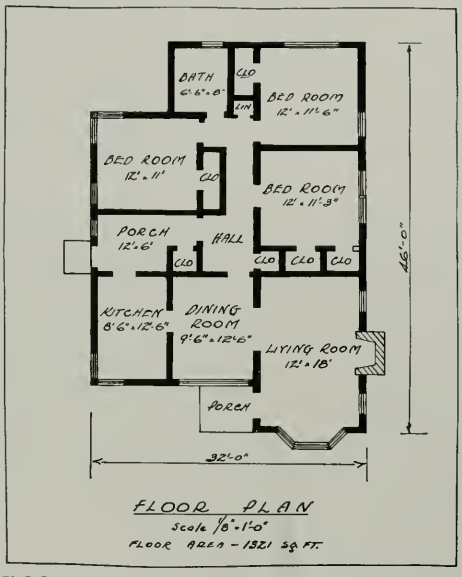


PLOT PLAN

STREET VIEW OF ONE STORY FRAME HOUSE, PAINTED WHITE WITH GREEN TRIM, BRICK CHIMNEY, SHINGLE ROOF AND VENETIAN BLINDS

This view was taken before completion of landscaping and garden planting.

made available even though every home in the tract is being built under mass production schedule which brings them within reach of anyone with a steady income. A typical interior view shows an agreeable spaciousness seldom found in homes of this size.



FLOOR PLAN OF THE ABOVE SHEFFIELD VILLAGE DWELLING

Theodore N. Thompson, Architect

Sheffield Village is the largest single group housing project in the West under Federal Housing Administration loans. Government standards and building requirements assure purchasers in this tract that their homes are the best that money can buy in this price bracket with F.H.A. terms of payment well below rental values found in this part of the city.

All homes in Sheffield Village are sold as a "package unit" with street and sanitary improvements in, together with lawns, shrubbery and landscaping of the front of each lot. The rear of the lots are graded and left to the ingenuity of the purchasers.

Interiors are also complete in every detail. Standard equipment includes all hardware and fixtures; hardwood floors throughout; tiled bathroom with tub and shower; automatic hot water heater; gas furnace; a well planned kitchen with built-in cabinets, shelves and cupboards and linoleum floor; at least three electrical double outlets in every room, and

AN INTERSECTION SHOWING GROUP OF SHEFFIELD VILLAGE HOUSES NESTLED AT FOOT OF SLOPING HILLS DOTTED WITH YOUNG LIVE OAKS

Photo by Howard B. Hoffman

A PLEASING COMBINATION OF STUCCO AND RUSTIC GIVES THIS SHEFFIELD VILLAGE HOUSE A FEELING OF FRESHNESS AND DIGNITY

AN ENTRANCE DETAIL

DINING ROOM IN A SHEFFIELD VILLAGE HOME

all walls attractively papered or painted in keeping with the aesthetic as well as utilitarian needs.

A decidedly feminine influence is noticeable in every home, not only in the color schemes of each, but the many built-in conveniences that gladden a woman's heart. They all have illuminated house numbers and built-in mail box. A coat closet is found near the front door. An electrical outlet is in the top of the mantel over the fireplace in the living room.

All bedrooms have good size electric lighted clothes closets with hanger-rods and shoe racks in place.

The bathrooms are beautifully modern and colorful. The tub is extra wide with a flat, non-skid bottom, and the walls inside the curtained-in shower area are protected by linoleum. Back of the French mirror over the wash-stands is the medicine cabinet and built into the wall is a large capacity electric heater. The larger homes also have a built-in vanity for party guests.

Built-in corner china closets are in the dining rooms of many of the homes and as you pass through the swinging door into the kitchen you are impressed with their well planned layout. A recess is provided for the refrigerator; the gas connections place the stove handy to the drainboard, and there is a large work shelf area under which are ample shelves and cupboards.

KINDERGARTEN FOR LITTLE TOTS TOO YOUNG TO ATTEND PUBLIC SCHOOLS

Shoulder-high hanging cupboards provide additional storage space. When standing at the sink you don't have to work in your own shadow from the dome light in the ceiling because every kitchen has a flush ceiling light directly over the sink. There is also a broom closet as a built-in feature of the kitchen or the adjacent laundry.

In the laundry are two set-tubs, an electrical outlet and working space for the electric washer as well as a built-in ironing board with metal-lined storage space for the electric iron. In one corner is the large hot water heater.

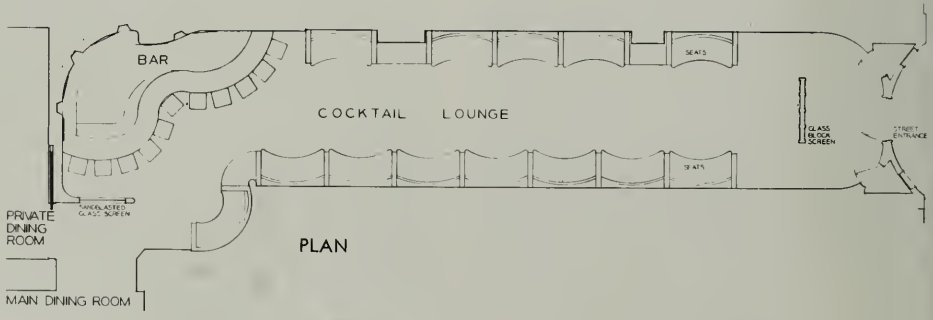
In the wall by the back door is a dairy products delivery service receptacle in which the milkman can put his deliveries and assure their protection from sun and rain. This is accessible to the housewife from the inside. Spacious one or two car garages are a part of every home in accordance with its size and every lot has plenty of garden space with rich, deep, easy-to-work sandy loam soil.

Thus by good architecture and intelligent planning of a large mass production home building program, the E. B. Field Corporation would seem to have made a valuable contribution not only to their community but to the National Housing Program as a whole.

TO THE RIGHT ARE THREE HOUSES TYPICAL OF THE TYPE OF DWELLINGS IN SHEFFIELD VILLAGE

THE VILLAGE HAS ITS CHILDREN'S PLAYGROUND WITH COMPETENT RESIDENT SUPERVISOR

STREET ENTRANCE TO MIKE LYMAN'S RUMPUS ROOM, LOS ANGELES, CALIFORNIA
Harbin F. Hunter, A.I.A., Architect



PLAN

RUMPUS ROOM

A COCKTAIL LOUNGE

Harbin F. Hunter,

Architect

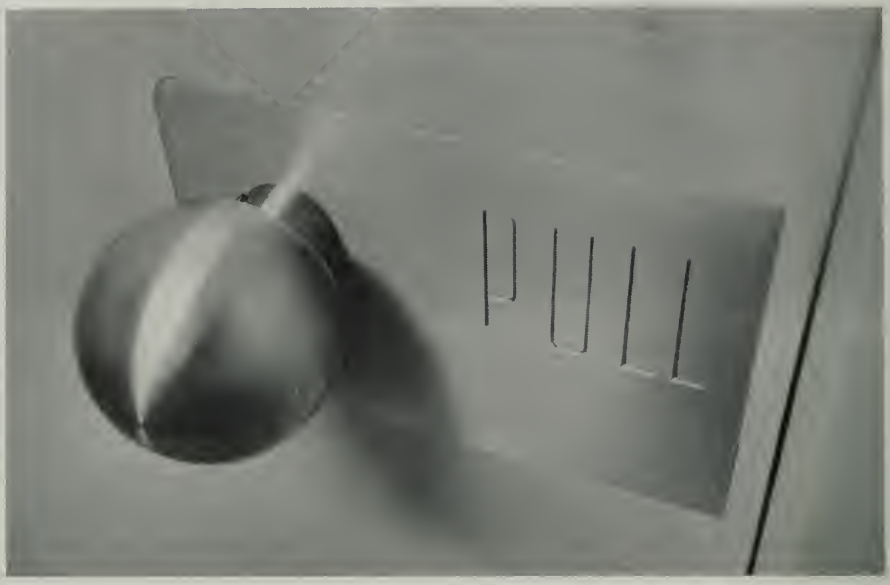
A UNIQUE cocktail lounge, styled by the owner, Mike Lyman, as a "Rumpus Room," has recently been completed in Los Angeles, from plans by Harbin F. Hunter, architect, who has supplied the following descriptive matter: Located to one side of the main dining room of the hotel, the lounge is directly in front of the private dining room. It is so situated that it may be operated with or independent of the main restaurant.

The entrance is enriched with a sandblasted glass screen, illuminated by concealed colored fluorescent lights. The bar is also illuminated by fluorescent lights back of sandblasted glass panels as shown in the photographs. The entire lounge is illuminated by fluorescent troughs extending across the room. Face of the bar and adjoining wall paneling are Zebra hardwood of a warm red finish. Side walls are lined with seats upholstered in coral color leather. Storage cases for linens, etc., built of Primavera hardwood, connect the seats at columns.

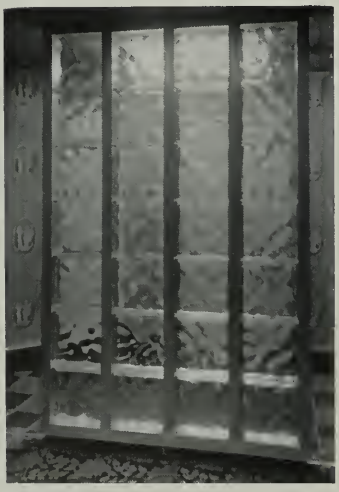
The floor is covered with a velvety carpet of a warm brown pattern to match the general color scheme of the room. The exterior of the place is faced with Roman travertine marble and bronze trim in the entrance floor of Realwood Formica.

DETAIL OF BAR

GENERAL VIEW OF INTERIOR



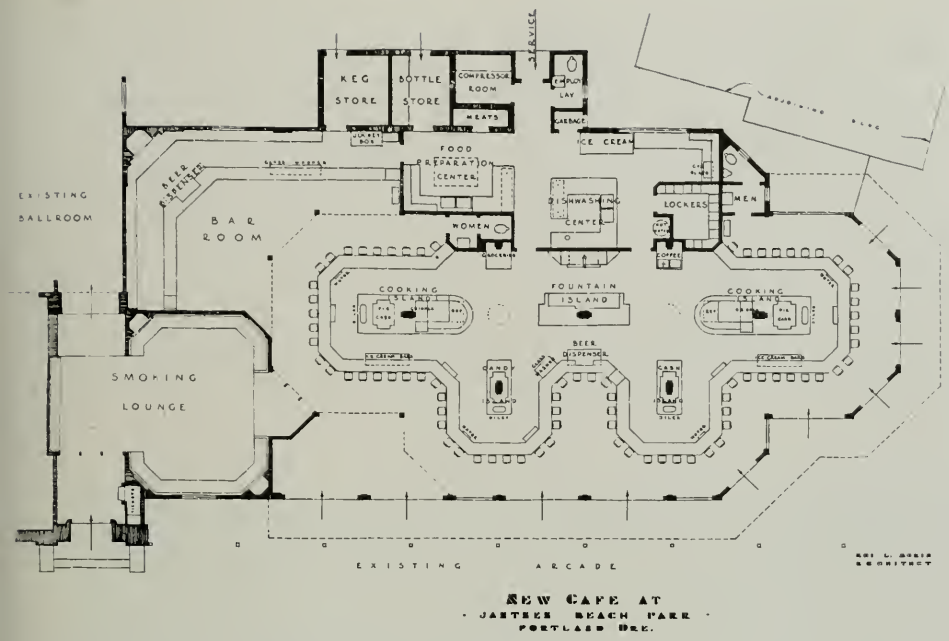
ENTRANCE DOOR PULL, MIKE LYMAN'S RUMPUS ROOM, LOS ANGELES, CALIFORNIA



GLASS BRICK SCREEN AT ENTRANCE OF RUMPUS ROOM

SANDBLASTED GLASS SCREEN BETWEEN DINING ROOM AND BAR

ILLUMINATED SANDBLASTED GLASS PAN BACK OF BAR



PLOT PLAN, CAFE AT JANTZEN BEACH PARK, PORTLAND, OREGON

A PORTLAND CAFE
FEEDS 20,000 DAILY

by Roi L. Morin, Architect

THE problem in designing a new "short-order" center at Jantzen Beach Park in Portland, Oregon, was unique in that the architectural layout could not be predicated on any normal load or daily turnover as is customary in the parlance of restaurant operators. This amusement center, whose principals are officials of the famous Jantzen (swimming suits) Knitting Mills, is the Coney Island of this metropolis. The park, with its "skooters," roller-coasters, and similar attractions, is open only from May first to September fifteenth each season, but the large ballroom is kept open week-ends throughout the year, with one of the nation's leading dance bands as a usual attraction. The former food facilities consisted of one full-course meal place of recent vintage and two short-order restaurants, none of which was within a block from the ballroom.

As the older of the two short-order counters had deteriorated to the point where it was a sanitary menace, it was proposed to wreck it and build a new cafe adjoining the existing ballroom, to serve not only as an eating place directly off the covered "boardwalk" but also as an adjunct to the ballroom for serving beer and other refreshments between dances. The problem was complicated because on an aver-

age week-day, when the skies are overcast, not more than 100 hamburgers with an equivalent amount of beer or coffee are sold throughout the park, whereas on a bright, sunny, holiday week-end as much as 75 kegs of draft beer, 1200 dozen hamburgers and an equivalent amount of coffee, "cokes" and candy bars are consumed. Attendance varies from 150 to 20,000 people per day! It was a problem, therefore, to design an interior that would not be barnlike on a minimum day, yet able to serve a capacity crowd without too much help on a holiday. Twenty-five employees for one shift was considered a maximum and the problem was somewhat simplified by the sparse menu—as hamburgers, "hot-dogs," pie, fountain drinks and ice cream, coca-cola, beer and coffee are the limits of the fare. Staple groceries and canned goods are also available for picnickers.

The accompanying plans and illustrations show the solution. For intimacy, as well as economy, a low ceiling was preferred, and ventilation was no problem as the entire front and side of the building open up to the boardwalk by sliding counterweight doors fitted into concealed pockets in the parapet wall. The extensive stool counter was broken up into wings, half of which might be cut off so service could be concentrated on an "off" day. The

GENERAL INTERIOR VIEW, NEW CAFE AT JANTZEN BEACH PARK, PORTLAND, OREGON
Roi L. Morin, A.I.A., Architect

service section was also split into two "Cooking Islands," the second of which is only operated during a rush period. The soda fountain was centrally located with 40-gallon service and a 100-gallon ice cream storage in the galley adjoining. In addition, two 50-gallon under-counter type ice cream-bar storage boxes were installed—one near each end.

Coffee is prepared at a specially-designed center with a twelve-plate gas-fired Silex stove with sink, special bowl spray and bin, kept warm on electrically-heated two and three-ring plates at convenient locations. For picnic service an additional gas-fired plate was provided, with army-type coffee kettles. Coffee service was geared to vary from a minimum of a two-plate bowl to a capacity of more than 100 gallons per hour.

To simplify the problem of park cleaning—the 100-acre tract is raked and swept between 1 and 10 a.m. every day—beer service is confined to draft and not bottles, cans or other containers. A walk-in refrigerator of 100-keg capacity was built with dispensers at three locations as indicated. These dispensers, with accompanying glass washers, were designed spaciously for rapid service, as during a crowded period two draft arms, open continuously, can hardly supply the demand. Each dispenser was equipped with its own self-con-

INTERIOR, SHOWING TUBE LIGHTING, NEW CAFE, PORTLAND, OREGON
Roi L. Morin, A.I.A., Architect

EXTERIOR VIEW FROM ARCADE, NEW CAFE AT JANTZEN BEACH PARK, PORTLAND, OREGON

SMOKING LOUNGE DETAIL WITH VIEW INTO BALL ROOM

DETAIL OF BAR ADJOINING CAFE

tained compressor coils.

Another large walk-in was provided for orangeade, coco-cola, milk and other necessary bottled goods. These two walk-ins, together with the 80 cubic-foot meat box, were all serviced from one 1½ H.P. compressor, with blower coils each automatically, thermostatically controlled.

For hamburger service, quarters of beef are hung at one end of the meat box, cleaned, cut, ground and formed into "patties" at the Food Preparation Center, then stored in platters on wire shelving at the other end of the meat box. Smaller refrigerators were built-in below the counters in each Cooking Island. These smaller boxes, together with their adjoining refrigerated pie-cases, were serviced by independent ¼ H.P. compressors. An additional ½ H.P. compressor cooled the fountain, a total of six compressors for refrigerating twelve scattered locations.

The building is of frame construction on a concrete foundation, stuccoed on the exterior, sand-finished plaster on the interior, painted and enameled four coats. The counters, islands and all exposed woodwork is V.G. Douglas fir with salient edges of maple. Counter tops are of battleship yellow linoleum trimmed with polished brass edging strips, with the counter fronts and wainscot painted a deep green. All visible sheet metal work is stainless steel.

Another unique feature of the layout is the stepped-down service area, the counter level being a comfortable 32-inch table-height on the public side, and 42 inches high on the service side. The upper part of the room is pale straw yellow with the ceiling off-white. The main cafe and bar are lighted by fluorescent tubes in "dished" tiers, following the counter pattern. Floor finish in public areas is asphalt tile and in service areas cork carpet. The smoking lounge is painted Chinese blue and coral with built-in seats upholstered in deep blue fabricoid.

The cost of building complete, including all service and mechanical equipment and architect's fee, was $25,000.

ARCHITECT
OF TOMORROW

by John Bakewell, Jr., F.A.I.A.

THIS process of Preparation for the Practice of Architecture follows a natural order of sequence that starts with the school or apprenticeship, continuing on through various stages that are finally completed with the granting of a license to practice architecture. After college comes a period devoted to gaining practical experience in the office and in the field, in which theory is tied up with reality, and with the ordinary routine business of getting out complete working documents and seeing that these are properly executed. Then come the final examinations for admission to practice, to see whether the lessons taught at college have been learned and whether the period devoted to experience has been fruitful.

All these stages must be considered as parts of one continuous educational process, all of which should be properly coordinated so that the first step, admission to school, is tied up with the last, admission to practice. Of course the process of education does not stop when the architect receives his license. It is only its beginning that is then complete, but from this point on it becomes a process of self-instruction and development in which he must rely largely upon himself.

The Institute is peculiarly fitted to assist at each of these three stages, School, Preparation for Admission to Practice, and finally the Continuation of Education after Admission. I wish to say that when I refer to The Institute I have in mind the lay members of The Institute, including all elements that combine to make up the layman's point of view, registration boards as well as The Institute. Some of the opinions that I will set forth may be at variance with those of that very important group in our membership, the teaching profession, whose point of view is in some important respects different from that of the laity. Also, to be perfectly frank, I must say that most of the thoughts expressed are personal and not necessarily those of the committee of which I am chairman.

The two preparatory stages, school and the interval between school and practice, are both devoted to preparation for practice and the two stages combined should be designed to lead up to the ability to render complete architectural service. It is not necessary for me to point out what composes such service. It is broadly defined in the amendments to our Standards of Practice.

Certain subjects must be mastered in order that this service may be rendered most efficiently and thoroughly. There are, of course, in this list some things that can only be learned in the school of experience, but all should be included somewhere in the preparatory curriculum, whether in school or in the post-school period of preparation for registration.

The moment that The Institute defined the duties of the architect it defined what the candidate for admission to the practice of those duties should know, and when the registration boards follow this up by demanding proofs of this knowledge, the whole preparatory educational program has been determined as well as the essential parts of its curriculum. This does not of course determine the curriculum of the schools since they form only the first part of the preparatory process. The schools themselves lay out their own curriculum, selecting the portions of the total preparatory program that they are best qualified to teach, or that they believe can be most advantageously learned in college, adding such other non-

Editor's Note—An address delivered by the San Francisco architect, who is Chairman of the Committee on Education of the American Institute of Architects at the recent Institute Convention in Louisville, Ky. The point emphasized in Mr. Bakewell's talk is that the program of education goes much farther than the school. It starts with the schools and ends when an architect dies at the finish of his career.

technical subjects as may appear to them of benefit as a part of their students' equipment. This will leave many things for the experience period after graduation, but although these cannot be advantageously mastered in college, they should all be touched upon, and the student introduced to them, so that at graduation he will not only have completed the college stage of training, but will know something about the subjects that he will encounter in the next stage.

Now, although the schools arrange their own courses and their own program, these must of necessity fit into the larger program of the whole preparatory period and must be affected very materially by the changes in standards and in the requirements for admission for practice that are constantly taking place, so that both Institute and registration boards may be said to have a very important, even if indirect influence upon school education.

REGISTRATION PREPAREDNESS

The part played by Institute and registration boards is much more direct when the next stage—that of Preparation for Registration—is reached. In the school stage, although the school curriculum may be affected by any change in registration requirements or standards, it is the responsibility of the schools to look after this stage. In the experience period, however, the whole responsibility rests upon the shoulders of the practicing profession. We have established the registration system, and we have set standards and requirements for admission to practice. It is our responsibility to see that the candidate is given help and encouragement to meet our demands. The schools' responsibility ceases when they have fulfilled their part of the program and have, in a preliminary way, prepared their graduates for the steps they still have to take. The very fact that they have decided that the comparatively few subjects left for this final stage cannot advantageously be taught in school should be a sufficient reason for seeking some other agency for teaching them.

The Institute recognizes its responsibility and has devised the mentor system to help the student through the interval between school and registration. However, the mentor system alone is not enough.

It would be of the greatest value to both candidates and mentors if courses could be arranged by The Institute to supplement the office work and extend the field of effort. The lessons learned in college could be reviewed and kept fresh and made much more serviceable, by application to and connection with the daily routine of the office. The one giving the course would be able to answer and point out the solution to questions that arise much better than the mentor could possibly do.

In addition to this review and practical application of college subjects, all the others postponed to this period would be covered, so that completion of the course under the instruction of teachers, and the advice and guidance of mentors would complete the whole preparatory-educational process and lead up to a thorough knowledge of all the requirements of practice.

A campaign should be conducted through the Chapters toward the installation of courses of this nature, not to supplant the mentor, but to enable him to better fulfill his task.

The last stage of education—that which assists the practicing architect in his development, and keeps him in touch with new ideas and new resources—can well be expanded by The Institute. It is already doing much in this direction, directly or indirectly; in fact most of the aims of The Institute have educational significance. It automatically gives each of its members the advantage of some of the experience and some of the knowledge of every other member. It is needless to point out the many ways in which these possibilities can be developed, and there is ample evidence that the members are demanding even greater activity on the part of The Institute in offering educational opportunities.

Throughout the course of training the needs and the best interests of the men being trained should always come first, and since they are students for a short time while they will be architects for a very long time, the whole pro-

cess should be conceived with a view to their welfare after they have become practicing architects; in other words, to the greatest good of the profession at large. This should be the guiding idea of the whole system and wherever a conflict may arise between interests, it is the interests of the practicing members of the profession that should take precedence.

MORE ARCHITECTS THAN NEEDED?

Looking at the whole process from the standpoint of the welfare of the architect, and this is also the real welfare of both students and candidates for admission to practice, we are brought to face certain conditions that at the moment are very important. The first of these concerns numbers and the second concerns standards. There are probably too many who are trying to make a living from the practice of architecture and too many of these do not measure up to the highest standard. I make this as a statement of fact since I believe that it states a fact. It might be better perhaps to put it as a quesion. Are there not too many?

However, whether it is put as a question or as a fact, there can be no doubt but that this touches upon a problem seriously affecting the well-being of those who practice. The amount of work to be done will provide a comfortable living for a certain number of architects and a certain number of draftsmen. If this number is too greatly exceeded, both architects and draftsmen are bound to suffer.

The architectural profession can undoubtedly absorb a certain number of new architects each year without danger to the welfare of either those entering or of those already established. Also, a certain amount of struggle for survival is healthy and beneficial to both profession and work. However, the number of men admitted can so much exceed this number that can be absorbed as to cause a very unhealthy condition.

How can the number of new men be controlled when it seems to greatly exceed the number that can be absorbed? There has been quite a little discussion of this question in the Committee on Education during the past year. Mr. Curtis, the chairman of the joint advisory Committee on Preparation for Practice, recently issued an inquiry in which it was included.

The general consensus of opinion seems to be that this can best be done by raising standards and by eliminating those who do not reach the highest standard, provided of course that it is desirable to limit the number admitted to practice, and this is not agreed to by all. As to how standards should be raised is another question.

The easiest place to cut down numbers admitted to practice is of course at the stage when the candidate comes up for the final test for registration. This is when the standard can be placed highest and the requirements made to include the widest field of subjects.

Just as the list of things the candidate should learn in the course of preparation was based upon what constitutes the ideal architectural service, so does the standard of preparation depend upon the final test of this knowledge and ability to perform these functions, at registration. This indirectly sets the standards of the schools as it would not be fair or just for the school to permit its students to pass through the portion of the preparatory program that the school has reserved for itself without insisting that he should at least reach a sufficiently high standard to pass the final test. Up to the present time the schools have led the way and set the highest standard, and if they are to keep the prestige they have earned they will have to raise their standards even higher as the registration boards advance theirs.

In order to prevent hardships and waste of effort the elimination of the unfit should start as soon as possible. This would start it at the beginning of the school course and as a matter of fact, would make the school the place where most of it is done. There is a difficulty here as the business of the schools is to educate the students, to teach what can be best taught in the schools and to teach it as well as possible and not necessarily to find jobs for the students after they have graduated or even to adopt a policy that would make it easier for them to find jobs. Many schoolmen feel that it is the duty of the schools to teach architecture to

everyone who wishes to learn, regardless of their ability, and if they would adopt some scheme by which the professional study of architecture was clearly separated from the cultural study, this would be a correct attitude to take.

There is the further complication that, whereas reduction of numbers of those being prepared is at present for the good of the profession, it does not at first sight appear to be for the good of the schools.

RAISE SCHOOL STANDARDS

With a larger number of students a larger staff of higher priced men can be obtained for the faculty and better equipment, a larger library and more comfortable working quarters. However, in spite of any apparent disadvantages, the good of the profession should come first and if it requires reduction of numbers it becomes the duty of the schools to see whether this cannot be done. As a matter of fact a little ingenuity may convert the apparent disadvantages into assets. The raising of the standards of a school immediately raises its prestige, and the harder it is to enter, the more eager worthwhile men will be to enter and to graduate, so that most of those eliminated will be men who can readily be spared.

It would occur to the layman that there are two ways in which admission to the professional school of architecture could be controlled to some extent just as it is in most other professions. The first way would be by demanding some knowledge of architecture and drawing as an entrance requirement. Naturally, this would not be much test of ability but it would at least tend to limit the course to those who are seriously interested and would prevent drifting into the course. The next would be by dividing the course into a cultural course for the first two years and then a professional course with very rigid entrance requirements. This would permit all those who wished to withdraw, to turn to some other course without loss of credits and without the stigma of failure, and would also eliminate those not able to pass the entrance tests to this professional course, or else require them to repeat their preparatory work until able to pass them. However, it is questionable whether either of these methods would be acceptable to the teaching profession.

After entrance if every student is required to attain a definite standard of progress before he is allowed to advance to the next year's work or to graduate, the machinery for raising standards to any height desired is present. This does not necessarily mean that the students who fail to reach these standards should be dropped. It merely means that they should be required to repeat the past year's work until they have achieved this required standard of progress.

Reference has been made to another agency, particularly interested not only in raising standards but also in advancing the interests of practicing architects. This is the registration system as represented by the National Council of Architectural Registration Boards. Originally, the purpose of registration and licensing was to protect the public from dangerous work of incompetent men, but this also has the effect of automatically protecting the architect from the necessity of competing with incompetence, and its accompanying low standards of service and price. It also reduces the number of architects by the number of these incompetents.

The recently established accrediting board represents still another phase of this question. While this board has been organized and will operate for other purposes, it would seem that it must tend to raise standards even if it does not attempt to do so.

Architectural beauty becomes breathtaking when this home is floodlighted to stand out against the dark surroundings. Friendly dignity and charm are expressed by trees flanking the entrance, lighted festoons over the doorway, and a cheery light in each window.

THE HOLIDAY MAGICIAN

LIGHT

by Agnes M. Barrell

WE who live in California at Christmas time in 1940 have more reason for expressing "Peace on Earth, Good Will to Men" than people living in almost any spot on earth.

Our beautiful state has led the way for many years in expressing this spirit of good will to our friends and neighbors at the holiday season.

This is the fourteenth year since the Outdoor Christmas Tree Association of California started its work of sponsoring the use of living trees for decoration. The Association was launched with the purpose of promoting "An Outdoor Christmas Tree for Every California Home," and recently added another slogan, "A Mile of Living Christmas Trees for Every California City."

It is largely due to the efforts of the Association, headed again this year by Mrs. Alma Spreckels Awl, that the State of California has been transformed into one vast Christmas card.

All over the state, cities have avenues of living trees lighted for miles. Residential districts have become incredibly lovely with almost every home decorated and lighted. Through garden clubs or other civic groups in some districts, the lighting of entire residential streets has been planned for unified effect, so that each individual decoration adds its bit to the total effect.

The past few years have seen even some of California's thousand-year-old giant Redwoods

LUMINOUS STEPPING STONES LEAD TO THE ENTRANCE OF THIS HOME. LIGHTED WINDOWS SUGGEST COZY WARMTH AND GAY DECORATIONS WITHIN

glowing with Christmas lights deep in the famed Redwood Highway.

A pleasant custom has been added to the holiday merrymaking—that of "Touring the Lights." Every evening for a week or more, caravans of "tourists" make their way from one beautifully lighted district to another to view the decorations. A popular form of entertaining during the holiday season is to organize progressive parties through the more beautifully lighted areas, to view the gay, spectacular extravaganza. Frequently prizes are awarded for the best lighted house or district.

Christmas holidays offer the one opportunity of the year for all of us to discard our discreet, restrained use of color and be thoroughly intemperate with it. We can create color effects in our homes and in our gardens that dim the rainbow, and yet we are in perfect harmony with the spirit of the season.

There appears to be no limit to the imaginative creations inspired by the holiday spirit, but perennial favorites are still the trees with multi-colored globes, or lights outlining and accenting the architectural features of buildings.

Another dignified treatment is obtained by floodlighting. Against the darkness of night, floods of warm colored light are often more effective than any possible decorations, especially where the lines and masses are outstandingly beautiful or individual. Many civic buildings lend themselves particularly to floodlighting.

Much of the charm of holiday decoration is in seeing the commonplace and familiar in a new light. Buildings we are accustomed to see every day cease to impress us. In the daytime each building is lighted from the same angles and with the same intensity as every other building around it. But with the darkness of night subduing all surroundings, a building can be made to spring alive with the magic touch of color and light.

How-to-do-it leaflets and booklets are obtainable without charge from the Outdoor Christmas Tree Association at 1355 Market Street, San Francisco, or from the Northern California Electrical Bureau at 447 Sutter Street, San Francisco.

FAMILIAR BUILDINGS SPRING INTO STARTLING BEAUTY AT THE TOUCH OF COLORED FLOODLIGHTING AT HOLIDAY TIME

SAN FRANCISCO'S FAMED LEGION OF HONOR BECOMES A CHRISTMAS EVE SHOWPLACE WHEN LIGHTED FOR THE HOLIDAYS

FLOOR COVERINGS

TYPES AND APPLICATIONS

MODERN floor coverings are more colorful and more durable today than ever before, according to manufacturers and dealers. Architects have almost unlimited opportunities in the selection of floor coverings, even to the extent of preparing special designs to symbolize the character of the building. But no one product will fit all requirements equally well. The task of selecting the one best floor covering for a specific installation requires close cooperation between the architect and the owner or building manager, particularly the latter if it be an alteration job.

That there are many kinds of floor coverings that must be considered for specific needs is evident from a survey by Buildings and Building Management which showed that "57% of the building managers who participated in the survey prefer linoleum for office floors, while 22% prefer asphalt tile, 16% rubber tile, 3% carpets and 2% cork. When it comes to corridors, however, the preferences change. For corridors, 48% like rubber tile, 33% asphalt tile and 19% linoleum. These preferences, incidentally, are only among the materials mentioned and do not indicate any lessening in the popularity of terrazzo, marble and other hard surface materials which are commonly used in corridors and lobbies.

That these preferences show such divergence in management thinking is particularly significant when it is realized that the survey also established that 49% of the building owners and managers who participated in the report are now providing floor coverings in office space, and that 65% of those who do not actually buy floor coverings are called upon to advise tenants in their selection, with 42% reserving the right to pass on any floor coverings that the tenant may want to install. This means that a total of 81% of all the owners and managers reporting in this survey are either directly buying floor coverings or are advising in their selection.

This fact, coupled with the differences of opinion reflected in the preferences for various materials, seems to imply that each material has certain attributes which have proved desirable under actual service conditions. What these are, and why they are important, may best be presented in the form of brief summaries of the principal features of the floor covering materials most commonly used in office and apartment buildings, published in a recent number of Building Management.

Linoleum is probably the most widely used of all floor covering materials. Its continued popularity, after 60 years in a market which has more recently seen the introduction of many new competitive products, is proof of the inherent soundness of linoleum as a covering material for office and apartment building floors. This material, which has undergone constant improvement since its early days without much change in its fundamental characteristics, is now available in many forms—carpet, tile, borders and individual patterns. It comes in a variety of colors and patterns and can be applied effectively in almost any decorative scheme.

The better grades are extremely durable under heavy traffic, and are easy to maintain at reasonable costs. Resiliency and quietness under foot are both desirable features in favor of linoleum for office and apartment use.

Like other resilient floor coverings, linoleum needs sensible protection against gouging, breaking and denting under heavy furniture. Stationary furniture should be provided with glides to prevent damage to the linoleum, and swivel chairs should be equipped with castors that do not bind and that have bearing sur-

faces broad enough to protect the linoleum against denting.

Linoleum is easily installed, and may be used satisfactorily over either wood or concrete floors. While it is not absolutely stain-proof, modern maintenance methods make it practically immune to damage under ordinary office and apartment service conditions.

The principal types of linoleum are battleship, plain, inlaid, jaspe, tile and variations of inlaid. Battleship, used extensively in office buildings for extreme service conditions, comes in various thicknesses from 1/8-inch to 15/64-inch. The heaviest grade comes only in brown, the 3/16-inch in brown, green, gray, terra cotta, black and mahogany, the 1/8-inch in a variety of colors.

For installations where traffic conditions are not quite so severe, plain linoleum is frequently used. This is available in a variety of colors which are solid through to the backing. Jaspe linoleum in which colors are combined to produce a more decorative effect, comes in heavy and medium thicknesses, the former being used for conditions comparable to those normally calling for battleship linoleum. Inlaid linoleum also will stand up under heavy traffic and is available in many colors and patterns. Among the more common variations of inlaid are straight line inlaid, marble inlaid, and feature strip inlaid borders. The marbleized type is especially good because it does not so readily show surface dirt. Linoleum tile is available in heavy form as well as medium, and comes in a variety of colors which can be utilized to make any desired design.

Also available are metal back and flash type coves and bases which can be used to join floor and wall without seams.

ASPHALT TILE AND FLOORING

Asphalt tile is now available in variegated patterns, marbleized effects and solid colors in light as well as dark shades. Manufacturers have overcome their early difficulties in combining colors with asphalt without impairing the wearing qualities. In addition to the decorative features of modern asphalt tile, it is possible to secure tile with special characteristics that make it suitable for special conditions.

Asphalt flooring manufactured with an asphalt felt base can be secured in rolls like linoleum and is readily cold cemented to any subfloor. It can also be applied in cold plastic form to produce a floor that resembles linoleum. It can be applied over new or old concrete, composition, wood or hard surface floors and forms a continuous, seamless flooring. Old, uneven floors can be leveled with this material, which can be repaired in worn spots by applying more plastic material. Cuts and small abrasions heal themselves.

Asphalt tile and flooring are resilient, warm and not slippery. Stains which are not solvent to the asphalt can be washed off easily, and even cigarette burns do not permanently mark the floor surface. Tiles which must be replaced because of damage can be removed without disturbing the rest of the floor.

Asphalt tile and flooring does not dry out, rot or create dust. It can be maintained easily and inexpensively. It is, however, soluble in oils, grease, gasoline and certain other materials, and spots of varnish, lacquer and paint are hard to remove because their solvents would also affect the floor covering. Extremes of heat and cold also affect asphalt tile, extreme heat causing the surface to soften and dent under pressure, extreme cold making it breakable under a hard blow. It is not quite as resilient as linoleum or rubber.

The principal type of asphalt tile and flooring now available includes asphalt tile in 1/8, 3/16 and 1/4 in. gauge, in a wide variety of colors and in many shapes and sizes. The heavier thicknesses are suitable for installation over wood or concrete subfloors, with the 1/4-inch especially recommended for heavy traffic areas. In addition, there is a heavy duty asphalt tile which is not only thicker, but also better suited for exceptionally heavy traffic or damp locations too wet for other types of resilient floor coverings. This material comes in red, mahogany, brown, black and a variety of marbleized effects.

For engine rooms and other locations where grease and oil is apt to be spilled on the floor, there is a special grease-proof asphalt tile in a wide range of colors. Where resilience and quietness are of paramount importance, a spe-

cial flexible asphalt tile can be used. This material has greater resilience, but is less resistant to indentation by furniture and other heavy objects. On the other extreme is a tempered asphalt tile which is harder than standard tile and has greater resistance to indentation. For installation over uneven wood floors, there is a special reinforced asphalt tile which has greater flexibility than the regular tile and accordingly conforms more readily to the uneven floor conditions.

Another product has a rubber content added to asphalt and asbestos base which makes it more resilient than most asphalt tile. Asphalt flooring, in rolls and feature strips, is available for extremely heavy duty areas where it is very durable. Asphalt mastic is particularly suitable for resurfacing old floors.

Cove base and straight base material is available to match all colors of asphalt tile, and combines with asphalt tile floors to make highly attractive installations which are extremely serviceable and very easy to maintain.

RUBBER TILE AND FLOORING

Rubber tile and flooring, like linoleum, has been popular for many years and is used for a variety of floors in office and apartment buildings. It was first choice among resilient floor coverings for corridor installations in the October survey, receiving 48% of the votes. It has undergone many improvements since its early introduction in the form of small, interlocking rubber tiles, which were available only in plain colors. While this type of installation is frequently seen in elevator cabs and corridors, the possibilities of modern rubber flooring are almost limitless in creating handsome and distinctive interiors.

Rubber flooring has many advantages, and many desirable attributes. Among these are that it is non-porous, and consequently does not buckle or warp. It is extremely durable and can be installed over any smooth, dry, hard surface. It is resistant to stains, and to the action of acids and alkalies. The colors are permanent and do not wear through under traffic. Rubber flooring is easy to keep clean, and can generally be brought back to its original beauty, even after its appearance has been marred by faulty maintenance, if the right methods are used. It is imperative, however, that the maintenance instructions of the manufacturers be followed, for oils and greases will permanently damage rubber flooring by softening the surface and causing dirt to adhere to it.

Rubber flooring is now available in a wide variety of colors and in marbleized and mottled effects. Its chief constituents are rubber and mineral pigments. Some of the cheaper grades are tough and durable, but likely to have an unpleasant, pungent odor. The better grades of rubber flooring are almost entirely free from this objection. The light colors, however, will show tracking and are not generally recommended for heavy traffic areas. If the choice of colors is well advised for the location of the installation, mopping with clear water is all that will be necessary for daily maintenance. Water emulsion wax is the customary protection for rubber floors in office and apartment buildings.

For heavy traffic areas, reinforced rubber tile gives the best results. This material is available in many colors and in several thicknesses. Where it is desired to create an attractive floor which will not readily show surface dirt, marbleized rubber tile will be particularly satisfactory. Granite and terrazzo effects can be achieved with rubber tile and such installations are extremely serviceable. Sheet rubber flooring is available for heavy traffic areas, in marbled and plain colors, and with contrasting ribbon and border effects or individual designs. Plain rubber tile will produce very pleasing decorative effects, but its tendency to show tracks limits its application in heavy traffic areas.

CORK CARPET AND TILE

Cork tile, while not as durable as some of the other resilient floor coverings, has certain advantages which entitle it to consideration for some types of installations. It is quiet underfoot, having great elasticity, and it acts as an insulator, giving protection against heat and cold. It is composed of many small air chambers which do not follow any grain, and it has therefore no tendency to warp or splinter. It is not slippery, and it lends itself well to distinctive decorative effects.

(Turn to Page 48)

AERODYNAMIC INSTABILITY CAUSE OF TACOMA BRIDGE FAILURE

IN the memory of old-time engineers there has never been a bridge failure to cause such wide-spread concern as the recent collapse of the Tacoma Narrows structure. Unlike other bridge failures, this one actually represents an advance in engineering that is bound to have a salutory effect. From this accident, which fortunately occurred without loss of human life, has come information of inestimable value—fresh knowledge about long-span, narrow suspension bridge design that will help to lessen the risk and probably lower the cost of building structures of this type in the future.

The Tacoma bridge **figured** for all known forces. No one was to blame. Because its designers pioneered they learned and henceforth all suspension structures will benefit. The fact that towers and main cables remain, after a test more violent than any to which such a structure was ever before subjected, bears testimony of strength margin in design and construction.

The following digest is from an address by Dr. N. A. Bowers, Pacific Coast Editor of Engineering News Record, before a joint meeting of San Francisco engineers, and sponsored by San Francisco Section, American Society of Civil Engineers. Dr. Bowers, in one of his articles in the News Record, referred to the model tests that were conducted after the com-

designers pioneered, they learned, and henceforth all suspension structures will benefit. The

pleted structure developed wave motion, he believes that had there been time for a minor change, collapse of the bridge would have been avoided. The model tests, it seems, showed aerodynamic instability, believed sufficient to set up oscillations of the kind that proved destructive, and plans had been made for streamlining (fairing), or else shielding the sides of the stiffening girders. Collapse came while arrangements were being made to change the structure in a way to give it aerodynamic stability.

VIOLENT vertical wave motion in the main span of the highway suspension bridge completed last July by the Washington Toll Bridge Authority over Tacoma Narrows, Wash., on the morning of November 7 caused complete failure and collapse of the floor system in the 2800-foot main span. Towers and main cables remain, as do the sagging side spans, after what must have been the most

THE 2800-FT. CENTRAL SPAN OF THE TACOMA NARROWS BRIDGE LOOKED LIKE THIS AFTER THE FLOOR SYSTEM HAD FALLEN INTO PUGET SOUND. MAIN CABLES REMAIN STANDING. NOTE BROKEN SUSPENDER CABLE (ARROW) TYPICAL OF WHAT HAPPENED ALL ALONG THE MAIN SPAN. NO DEFICIENCY OF DESIGN OR MATERIAL IS INDICATED

Photo by Bowers

terrific shocks to which any such structure was ever subject. Removal of floor systems in the side spans, whose weight was holding the towers deflected shoreward, began next day and final decision as to whether towers and cables would have to be dismantled awaits more detailed inspection to be made after the side span unloading. The bridge was designed for H-20 loading on a two-lane roadway, 26 ft. wide (39 ft. between main cables) and wind at 100 m.p.h. or 30 lb. per square foot on 1½ times the exposed area (maximum wind would have caused 20 ft. sidesway as compared to about 2 ft. maximum ever observed). Towers are 420 ft. high, vertical clearance of deck above water 196 ft. Slenderness ratio of main span 72 feet.

Wind velocity at the time of failure was 42 m.p.h., less than the bridge had withstood previously without damage. The vertical wave motion, which previously had been harmless, on November 7 somehow developed a lag or phase difference between opposite sides of the bridge, giving the deck a rocking or side-to-side rolling motion with cumulative characteristics. Failure appeared to begin at mid-span with buckling of the stiffening girders, although diagonal bracings may have gone first. Shocks sustained by suspenders snapped them with a violence that threw broken ends high above the main cables, while sections of the main span floor system several hundred feet in length fell out, successively breaking up the roadway toward the towers until only stubs of the floor system remained.

When load was removed from the main span by the falling floor system, the main cables rose and side spans sagged a total of 30 feet. This unbalanced loading pulled tower tops shoreward. Both towers, on the following day, were 12 feet out of line at the top, which was about twice the designed maximum. Unloading of the side spans caused this tower deflection to decrease gradually.

Outward evidences of tower damage are buckled plates and angles, especially on the compression side near the piers, where the plate thicknesses are ½ and ¾-inch. An inspector reported that the cables showed no evidence of movement in the tower-top saddles in the course of the violent bouncing, and the piers themselves were believed to be undamaged although there are evidences of straining and some yielding in the riveted connections between the tower itself and steel channels projecting up from the anchorage in the concrete of the pier top.

Ten different wave periods had been observed on a 1-to-100 scale model at the University of Washington laboratory and on the

Photo by Bowers

LOOKING UP FROM WATER LEVEL TO THE UNDERPART OF THE FLOOR IN THE TACOMA SIDE SPAN OF FAILED BRIDGE, SHOWING A SEVERE DEFLECTION OF STRINGERS WHILE, CURIOUSLY ENOUGH, LATERAL BRACES AND CONNECTIONS REMAIN INTACT

prototype. Observed, perhaps more frequently than others, was the 12-second period which was the frequency of wave motion at the time of collapse. In these various waves (from 12 to 36 per minute) it was noted that the midspan was subjected to the least vertical movement and, presumably, to the maximum flexure. It was here, most witnesses say, that the first structural failure occurred.

Prior to November 7 such vertical waves as had occurred never got out of step on opposite sides of the bridge and no damage was done, although at times smooth uniform waves with as much as 50-inch amplitude were observed. Remedial measures adopted included tie-down cables in the side spans, diagonals from main cables to girders at midspan and brakes in the connection between suspended structure and towers. Diagonals from tower tops to the deck were once considered as a more permanent remedial measure.

Supporting the theory that the stiffening girders were the first to fail, is a picture that shows a decided disalignment of these girders at midspan (possibly a kink or a shear rupture) at a time when the concrete roadway can be seen to be still intact. Another picture taken soon after the first concrete fell out shows a pair of diagonals broken loose and hanging below the floor system.

About a month prior to the collapse a 1-to-20 scale model of a section of the floor system was put in the wind tunnel at the University of Washington and was found to have such unstable characteristics as to fully account for the waves observed up to that time. This was followed, as soon as possible, by wind tunnel studies looking to remedial measures that would prevent the vertical wave motion instead of endeavoring to damp and control it later. These had been carried to a conclusion and a contract for the installation of a deflector vane that was expected to give the structure aerodynamic stability, was under negotiation on November 7.

According to the wind tunnel tests, this stability could be obtained by the very simple expedient of a small deflector vane on the outer faces of the stiffening girders. These girders, 8 feet deep, were indicated by the wind tunnel tests as the cause of the vertical component of wind pressure which produced the vertical wave motion. Because of the unstable characteristics, this component easily reversed its sign from positive to negative, thus constituting a cumulative cause when any wave motion developed. In other words, the proposed remedy simply prevented continual reversal of vertical components of the wind forces by making the section stable in an aerodynamic sense.

Although this vertical component may represent an almost negligible force, yet under conditions obtaining on Nov. 7, when the phase of the waves on opposite sides of the bridge got out of step, enormous amounts of energy were built up in the twisting floor system. Careful observation showed the transverse tilt of the deck to have been as much as 45 degrees with the horizontal. This is equivalent to an up-and-down movement of 28 feet at the outer edges of the deck; resultant waves are reported to have moved with an acceleration that exceeded gravity.

Under such conditions, it seems inevitable that any ordinary floor system would be entirely wrecked. The fact that main cables and towers remain standing after such a test is strong testimony of the wide margin of strength and stability in their design and construction.

NATIONAL DEFENSE

THE National Defense Program is already having a noticeable effect upon the building industry in the East, according to Clair W. Ditchy of Detroit, Regional Director of The American Institute of Architects, who explains:

"The influence of the program is evident in the advance in price of certain building materials, notably lumber, and this may be traced directly to the great demand for lumber for military camp expansions. This has caused a shortage in the market supply of lumber with a consequent strengthening in price quotations. Once the market has become adjusted to this unusual demand, we may look for a steadying of prices. Also it is not unlikely that government scrutiny and control may prevent unwarranted advances in material costs which if not checked would have a very depressing effect upon the volume of private construction.

"The architectural profession is being profoundly affected by the activity of the national program. Although it has so far brought work only to the larger offices, this work has served as a stimulus to private initiative, and firms and individuals who had set aside their building programs for the time being are now scanning the increased activity in business, delays in deliveries, advancing costs and other symptoms of a rising market and are preparing to proceed with their building expansion. People who have hesitated about building new homes now view the possibility of an appreciable increase in costs if they delay any longer and are persuaded that the size of the national program will support a sustained period of good business. Others believe that building at a period such as the present represents the soundest type of investment.

"The large offices that are now busy with large defense projects have absorbed all of the unemployed draftsmen and have increased their forces in some instances with men from other cities. Many of the smaller offices have released men, hoping that they will be available if and when their services will be required.

"Private housing has not been greatly stimulated as yet but it is inevitable that new housing will be required in the vicinity of new plants which will employ thousands of workers. Heretofore much of this housing market has been supplied by the speculative builder but it is quite conceivable that housing projects may be undertaken by private initiative with F.H.A. or some other form of government operation and with architectural planning and supervision as a prerequisite item.

"Many of the smaller plants which will be called upon to supply accessories have not yet received any defense program orders and consequently have not as yet felt the need of expanding their facilities. There are indications, however, at the present time that many tool and die shops and kindred feeders to the main industries will soon proceed with additions to their present facilities.

"Just what effect conscription may have upon the profession remains to be seen. Undoubtedly, key men will be exempted and most of the valuable and experienced men are over the age limit and therefore not subject to conscription."

FLOOR COVERINGS

(Continued from Page 44)

Cork flooring is, however, not recommended for installation where there is likelihood that much water will be spilled, or where there is dampness. It is only moderately grease- and stain-proof, and has a relatively low resistance to indentation by furniture and other heavy objects. Properly maintained, however, it provides a very satisfactory floor and one that blends nicely into most office and apartment building decorative schemes.

Cork tile comes in three shades of soft brown, roughly designated as light, medium and dark. Each color group has variations in shading which make possible a rich blending of all three shades. This material is available in various sizes and shades, with border strips and border tile. Cork tile flooring, which resembles wood flooring when laid, comes in strips, and is obtainable in the three shades of brown. Cork carpet, generally used only when there is not much traffic and where dirt is not tracked in, comes in green and brown lengths, six feet wide and 1/4-inch thick. Cove base material is available in various heights to make a watertight joining with the wall.

ARCHITECTS' BULLETIN

Issued For

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Northern Section

STATE ASSOCIATION MEMBER
OF THE
AMERICAN INSTITUTE OF ARCHITECTS

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CITY PLANNING

AT the October meeting of the Northern California Chapter, A. I. A., action was taken toward a more aggressive support of an adequate City Planning program for San Francisco.

The City Planning provisions of the present Charter are to a considerable extent the child of architects and engineers, working through their own organizations, but also through the Commonwealth Club, whose sponsorship and influence were largely responsible for the provisions included in the San Francisco City Charter, and adopted by vote of its citizens.

It was the sense of the Chapter meeting that a co-ordinated effort should be made by all the architects' organizations, working with other organized bodies, to remedy the present situation. After the labor pains, we blandly pushed the babe out into the cold world and left it to grow and develop by its own sweet will, while we went about our own business. But this **is** our business; and for our members' information and benefit, we print, below, a statement of what we believe to be veritable facts and conditions. We believe that after reading this statement our members will heartily approve an aggressive policy by our Chapter and Association committees, co-ordinated with committees of engineers and other interested groups. The statement follows:

PLANLESS SAN FRANCISCO

The San Francisco Bay Region is essentially a coalescence of residential, industrial and commercial areas into an organism bigger than any of its parts. San Francisco has long felt its importance as the largest unit in this metropolitan area, but it is only one cog in the larger mechanism, and its movement and growth is hampered, or facilitated, as the case may be, by all sections of it. The Region can develop further to full stature only if its nature is politically recognized by the formation of an effectively functioning Regional Planning Commission.

Within San Francisco, the problems faced by the Region are duplicated on a smaller but equally important scale. Lip service to this fact has been given in the city by creation some years back of a City Planning Commission. "It shall be the duty of the Commission to make, maintain and adopt, including changes therein, a **Master Plan** of the physical development of the city

The five-member Planning Commission, which is appointed by the Mayor, has the power to prepare this master plan—and to exercise zoning control over land usage. To date, San Francisco has no plan—and "Zoning Commission" would be a more appropriate title for this agency—for its major concern and effort is diverted to appeals for zoning changes and other relatively trivial matters. It has not prepared any orderly, well-laid plan for the city's growth and re-development.

Consideration of the problems of planning in San Francisco was made in a private study during the summer of 1940. The study, unpublished to date, covered in its first section the exercising of zoning control by the Planning

Commission, regulating of subdivisions and the surveys already completed. The rest of the study dealt with the creation of a master plan; what has been done to develop it, what should be done, and how it can be made an effective reality.

ZONING ORDINANCE

The original Zoning Ordinance, drawn up in 1921 and revised in 1935, is poor compared to other cities. It provides for only six land-use classifications, when 10 or 11 are needed.

Residential Classifications: (two) Single family and apartments. These are used instead of the necessary four or more; single family, two family, four family with restricted building heights, and apartments with higher height allowances.

Commercial Classifications: (one) No distinction is made between downtown business district and neighborhood shopping centers. Need for three classifications.

Others: (three) a) Light Industrial, b) Heavy industrial, c) Unrestricted. The distinction between light and heavy industrial seems to be superfluous in effect.

Provisions Regarding Lot Sizes: No provision ascertainable on minimum lot size, except for a section in the zoning ordinance permitting two family houses in a single family residential district if there is 5,000 sq. ft. of open space. This is one feature that, de facto, has not been followed out in San Francisco.

Building Heights: So far as can be seen, there is no provision for restriction of building heights.

Miscellaneous Criticisms of the Zoning Ordinance:

1—Requirement for open land per residential lot is far too small; the law allows 90% coverage of corner lots and 80% coverage of interior lots.

2—First class residential districts adjoin industrial areas.

3—Too high a percentage of the city is zoned for commercial purposes, and too little for residences and parks.

4—Residential areas are zoned regardless of proximity to, or lack of shopping centers.

5—"Strip" zoning is effected.

6—Five agencies have administrative power over the ordinance: Department of Public Works, Board of Health, Police Department, Fire Department, Department of Electricity. The Planning Commission is not mentioned in this connection—but apparently all of the different departments were under the assumption that complaints on the Ordinance are handled by it.

Enforcement of Zoning Ordinance:

1—The "Planning" Commission spends most of its time hearing appeals for changes in the Ordinance—

1938	94 appeals
1939	184 appeals
1940 to August	89 appeals

(at a rate of 160 for the year).

Oakland, 2/3 the size of San Francisco, only has 20 appeals for zoning changes yearly, and this is due to insistance by its Planning Commission not to allow "spot zoning."

2—Reasons for zoning changes by the "Planning" Commission: The point of view of the individual request is heavily weighted, and the wider needs of the entire city are slighted. Also—the large number of people appearing at hearings seems to be a detriment in making decision—non-technicians pressuring a non-technical commission on technical matters.

APPROVAL OF NEW SUBDIVISIONS

No subdivision ordinance has been drawn up by the Planning Commission or any other agency. None has been passed by the Board of Supervisors, although one was presented to the Board a year ago. This was rejected, and no further attempts have been made in this direction.

The Planning Commission has not prepared regulations or set up standards for evaluating new subdivisions. Approval of these is by the rule of thumb. The existing street pattern is followed; and there is no plan for forestallment of premature developments. The Commission does not discuss new subdivisions, and leaves them to the Board of Public Works. This may result in the streets being too narrow or too wide; park facilities may not be provided; and house lots will be crowded, etc.

Subdivision plans come up to the Department of Public Works for approval. These are submitted to the Planning Commission for an opinion. However, the Department of Public Works does not have to follow any recommendation made by the Commission.

THE MASTER PLAN

To date a Master Plan has not been completed and no concerted effort is being made to develop one. However, a few important studies have been made which are important to planning, but these have been largely neglected. Among the studies are the Major Street Plan of 1931; the McClintoch Traffic Survey; and two property surveys, one done in 1927 and one which was completed in 1940. The McClintoch Survey was a very extensive one. Strangely enough, however, it was submitted to the Department of Public Works and not to the Planning Commission. One person in the Department of Works, commenting on this extremely usable survey, stated that it was "merely a relief project to give people something to do."

Other minor surveys have been made, but by and large they have not been related to the problem of planning. There is need for thorough population, recreational, school and topographical surveys which would be coordinated with the transportation, street plan, and residential surveys, as well as the information which has been provided in the Planning Commission's land use study. Income and expenditure surveys of agencies of the city government, as well as industrial and business surveys, zoning surveys and land subdivision surveys would be needed to complete the "picture" of our city, so necessary for adequate development of city-wide plans.

WHY SO LITTLE PLANNING IN SAN FRANCISCO?

The budget is limited to $15,000, most of which goes into salaries. This is of course a handicap, but other cities such as Oakland, with a city planning budget of $12,000, are doing excellent jobs.

Recommendations

1—A positive policy of City Planning.

2—More public support of planning.

3—A new and stricter Zoning Ordinance.

4—Drafting of and establishment of a subdivision ordinance.

5—A thorough coordination of studies already made.

6—Allocation of money by the City to carry out additional, vitally important studies.

7—Granting of increased power and money to the Commission and staff.

8—Make an attempt to relate San Francisco to the region around it—politically, socially and economically.

President Reimers has appointed the following committees, affirmed by the Executive Board of the State Association of California Architects, Northern Section:

COMMITTEES FOR 1940-1941

Governmental Relations & Legislative Committee: W. S. Hertzka, Chairman; R. Stanton, E. J. Maher, J. J. Donovan, H. J. Devine, A. J. Evers, H. H. Weeks.

Public Relations: N. K. Blanchard, chairman; M. Goodman, H. P. Clark, A. S. Lee, H. C. Allen, M. D. Reynolds, A. R. Williams.

Professional Relations: W. C. Ambrose, chairman; E. R. MacDonald, W. C. Perry, C. F. Kett, W. E. Baumberger, S. Haymond.

Industrial Relations: A. T. Hass, chairman; T. J. Kent, E. B. Page, W. H. Knowles, F. H. Reimers, H. M. Michelsen.

"Scribe": H. C. Allen.

Technical Relations: E. J. Maher, chairman; J. E. Dinwiddie, W. T. Steilberg, A. C. Williams, W. G. Corlett, F. H. Meyer.

Treasurer's Committee: M. J. Ciampi, chairman; O. G. Hintermann, A. N. Pollack.

Architects' Board of Control: H. C. Allen, V. G. Raney, M. J. Ciampi, N. K. Blanchard, H. M. Michelsen.

District Societies: D. H. Horn, chairman; C. F. Trudell, W. H. Rowe, E. E. Weihe.

Entertainment: P. A. Ryan, chairman; C. W. Mayhew, H. C. Allen.

Draftsmen's Organizations: Elizabeth Boyter, chairman; H. E. Goodpastor.

DESIGN THIS DAY

Perplexing problems of design face every architect today. How is he to create the flesh and bones of an architectural unity which will satisfy the requirements for structural honesty, functional fitness, harmony and beauty, when new conditions have apparently done away with all the old rules and guides and styles? It is like "Blind Flying," trusting to instruments and mental calculation alone, without land or sky marks to point the way.

Our old (and expensive) libraries are of little or no help in this confusing situation. And so it is encouraging to find an author who throws some of the light of reason on the subject. Harcourt, Brace & Co., New York, have just published a book by Walter Dorwin Teague—"Design This Day—The Technique of Order in the Machine Age." Architects will profit by reading this thoughtful, well illustrated essay. And do not be prejudiced by its reference to the machine age, for Mr. Teague does not urge slavery to machine products, but rather mastery over, and utilization of them.

He defines the Art of Design, excellently, as "the art of enforcing order on material substances for our service and satisfaction." He emphasizes that the laws of design are **constant,** while there are variable factors in every age, race and craft which affect these laws.

In short, here is a logical, concise analysis of present conditions which can be recommended as a useful help to architects in thinking through their design problems.

STUDENT BRANCH

In the Bulletin of the Michigan Society of Architects it is announced that the Detroit Chapter, A. I. A., is establishing a Student Branch in the University of Michigan; a group of outstanding students selected for scholastic standing and for their serious attitude toward architecture.

Our own University, with its fine School of Architecture, would seem to offer a similar opportunity for enlisting the interest of students in Architectural Standards. We recommend consideration of this idea to the Northern California Chapter, A. I. A., with the suggestion that it would involve, also, a real responsibility on the part of the Chapter members.

FATAL ACCIDENT TO GEORGE WINDSOR

George Windsor, contractor of Alameda County, passed away on October 14, his death resulting from an auto accident when returning to California from Virginia where he had been vacationing. Mrs. Windsor, who accompanied him, was severely injured.

Windsor, aged 46, was born in Custer City, South Dakota, and spent his boyhood in Oregon. He came to Oakland in 1915, and since that time had been actively engaged as a general contractor in the East Bay area, constructing over three hundred homes and developing many high class subdivisions.

CIVILIAN SHELTERS

Plans for civilian shelters in New England which may serve as models for other areas of the United States are being prepared by a special committee of the Boston Chapter of the American Institute of Architects. The work, it is explained, is part of a comprehensive program of non-combatant defense which is being developed by the committee, headed by Chester Lindsay Churchill, architect, of Boston.

THE ARCHITECTS' OPPORTUNITY

"I would not say that the bombing of Europe is not a blessing, because at least it will give the architects there a chance to start all over again."—Frank Lloyd Wright.

THE ARCHITECTURAL PROFESSION

The architect must take a more active interest in civic affairs and prove to his fellow citizens that he is ready to aid in affairs of the community. There is no reason why architects should not be valuable members on school and park boards, and as building inspectors in their community. The May number of the Octagon has an interesting article which shows what the City of Ladue, Missouri, was able to do. This can be accomplished only by real unselfish cooperation of the architects in each community. Such action will assuredly make the public architect conscious.

The state of affairs today demands action, and hence, the architectural profession must become cognizant of the fact that unless it organizes by state, county, and community, to combat and overcome the increasing number of evils confronting the profession, neither the architect as an individual, nor the profession as a whole, will ever attain the success to which it is entitled.

The Institute and societies should make every effort to end governmental interference in the building industry. Nothing will prove as helpful to make the public realize the value of the services a competent architect can render as the adoption of a state building code. —Leo H. Pleins in Illinois Society of Architects Monthly Bulletin.

FRANCIS J. PLYM FELLOWSHIP

The Twenty-eighth Competition for the $1,200 Francis J. Plym Fellowship in Architecture is announced. It is open to all graduates of the University of Illinois Department of Architecture and will be held in two parts, the preliminary during January and the final during February and March. Although the Plym Fellowship is for European travel, the committee reserves the right to determine when conditions permit foreign travel and study.

The Eighteenth Competition for the Plym Foreign Fellowship in Architectural Engineering also is announced by the committee in charge.

For further information address Professor L. H. Provine, Department of Architecture, University of Illinois, Urbana.

NORTHERN CHAPTER MEETING

A joint meeting of Northern California Chapter, A.I.A., and the State Association of California Architects was held at Veneto's, San Francisco, at 6:30 p.m. on Wednesday, November 27.

Members present: Messrs. Harris C. Allen, A. Appleton, John Bakewell, Jr., John Knox Ballantine, Jr., Ernest Born, Henry C. Collins, Irvin William Goldstine, Andrew Hass, Irwin M. Johnson, Ralph N. Kerr, William H. Knowles, Harry M. Michelsen, Leffler B. Miller, James H. Mitchell, Howard Moise, William Mooser, Jr., Ralph N. Pollack, Vincent G. Raney, Frederick H. Reimers, Eldridge T. Spencer, Robert Stanton, Alfred C. Williams, Albert R. Williams, William Wilson Wurster, John Davis Young.

Guests present included Frank H. Beckmann, the speaker of the evening; Burnett Turner, of the U. S. Housing Authority; Mr. Sage, of the California Commission; T. L. Torrison; Miss Elizabeth Boyter, of the California Society of Architectural Draftsmen; William Hague, of the Associated General Contractors and Clark Wayland, of the Western Asbestos Company.

The problem of obtaining a Master Plan for San Francisco through the City Planning Commission was discussed. It was brought out that to best accomplish this the personnel of the Commission should be strengthened by the inclusion of technically trained members, and that a considerable amount of money would be required.

A motion was passed that the San Francisco Federation of Arts take the lead in cooperating with the City Planning Commission, assisted by the various delegates and officers of the Chapter and the State Association.

Robert Stanton favored the group with a song, accompanied by Mr. Allen at the piano.

Mr. Blanchard spoke briefly about plans of the State Association Public Relations Committee, mentioning the resumption of the radio program in the near future and the formation of a speakers' club in an endeavor to reach the public.

Mr. Torrison gave a highly entertaining performance, illustrating in a remarkable manner his ability to memorize many things quickly.

Mr. Reimers introduced the various guests, and Mr. Raney introduced Frank H. Beckmann, of Beckmann, Hollister & Co., who gave a very interesting talk on "Selling Architecture by Selling the Architect."

—J. D. Y.

PRODUCERS' COUNCIL JINKS

The annual Christmas Jinks participated in by the Producers' Council Club and the San Francisco Bay District architects was held at the Lakeside Country Club Tuesday evening, December 10th with a large attendance. Prior to the dinner and floor show, members and guests partook of appertifs, prepared by inimitable mixers. To make it a perfect day some of the guests played golf in the afternoon.

BENICIA VETERANS' BUILDING

Plans are being revised for a Veterans' Memorial Building at Benicia by Harold H. Weeks, architect, 593 Market Street, San Francisco. Bids previously taken have been rejected.

SAN MATEO RESIDENCE

A contract has been awarded for construction of a $9,000 residence in San Mateo for Richard Leavitt, from drawings by Chester H. Treichel, 696 Cleveland Avenue, Oakland.

FAVORABLE CONSTRUCTION OUTLOOK FOR 1941

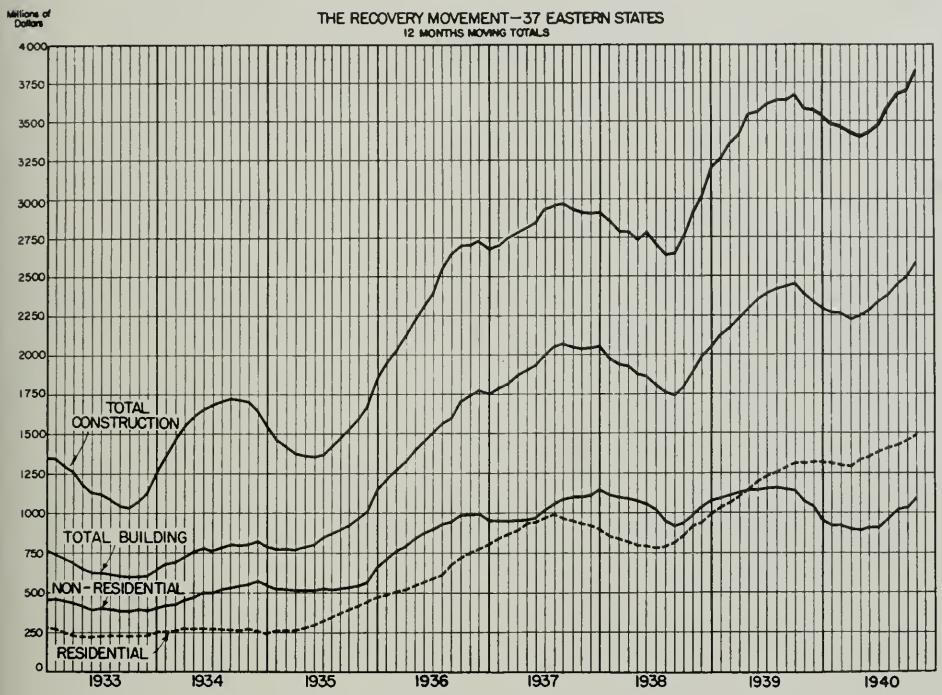


Chart Courtesy of F. W. Dodge Corp.

ESTIMATING the 1940 building and engineering contract total for 37 states at $3,850,000,000, the figure for 1941 is set at $4,400,000,000, an indicated over-all increase of 14 per cent, and the largest construction volume since 1930, according to the F. W. Dodge Corporation.

Construction for the defense program is expected to dominate next year's activities, to run to very large volume during the first half of the year and to carry a distinct possibility of enlargement if additional appropriations are made by the next Congress. Concurrent with large amounts of army, navy, air corps, defense industry and defense construction, continually increasing industrial production activity and industrial employment are anticipated, with stimulating effects on national income and private building demand (commercial, manufacturing, and residential buildings and electric utility construction). Translation of this potential private demand into actual building and engineering contracts will hinge upon two important factors:

1. Whether potential construction industry capacity is adequate to carry the double load of largely increased public and private demand.

2. Whether building cost increases remain within reasonable bounds.

As Dodge analyzes the situation, temporary local shortages of certain classes of materials and certain categories of skilled labor are likely to occur, particularly during the peak period of cantonment building. Such conditions may very well cause temporary deferment of some private building projects and even of some defense housing projects. No extended period during which private building would have to be long deferred or abandoned as a direct result of government priorities is anticipated for 1941.

More uncertain, according to Dodge, is the prospect for stable building costs. It is pointed out, however, that while market demand factors tend strongly in the direction of the building costs inflation which has always in times past accompanied armament and war programs, consciousness of the disastrous effects of price inflation upon the whole economy is today keener and more wide-spread than ever before and efforts to exert all possible controls will be applied by leaders in industry, labor, and government. Dodge analysis indicates a probability that building cost increases will remain within moderate bounds during

most, if not all, of 1941.

Pointing out that the very large volume of defense construction that will take place can scarcely constitute a net addition to the program of private construction that would normally develop in a year of record-breaking industrial productivity, and also the usual uncertainties of the situation, the statement cautions against over-optimistic estimates of 1941 volume increases, indicating that budgeting of sales and production plans by building material producers should preferably err on the side of conservatism.

A CHALLENGE TO PLANNERS

John R. Fugard, architect of Chicago, past-president of the Illinois Society of Architects, and treasurer of the American Institute of Architects, recently delivered an address on "What Is Happening to Our Central Business Districts," before the National Conference on Planning at the Fairmont Hotel in San Francisco. Mr. Fugard, represented the American Institute of Architects and the National Association of Building Owners and Managers. Among other things the speaker said:

"In my opinion, based upon a study of the many factors involved, it would seem that as taxes increase, along with increasing demand for public services, and, as the tendency increases toward a more definite social security, together with a rise in median age, smaller family size, and the accompanying demand for more units of habitation of greater compact and economical size, there will be a definite trend and ever-increasing shift of population back to urban areas, where economy of living, cheapness and efficiency of transportation, and proximity to employment are basic factors.

"Thus we may expect to see the dismal marginal areas of downtown districts again become producers of financial return through rehabilitation in form and function, and become properly planned residential areas where gracious and genial living conditions will maintain.

"Herein lies the challenge to planners, for it is only then that we may expect to see the permanency of downtown business areas become established and the process of decentralization halted."

ENGINEERS AND CONTRACTORS MEET

For the first time since its organization, the A. S. H. V. E. will hold a meeting on the Pacific Coast when the semi-Annual Meeting 1941 is called to order at the Palace Hotel in San Francisco, June 16.

A gala program is promised and members of the entire heating, ventilating and air conditioning profession and industry on the Pacific Coast will have the opportunity of attending the Pacific Heating and Conditioning Exposition at the Civic Auditorium in San Francisco.

The Board of Directors of the Heating, Piping and Air Conditioning Contractors National Association has announced that the 52nd Annual Convention of that organization will also be held in San Francisco, St. Francis Hotel, during the same week. This convention will give the contractors of the Pacific Coast region an opportunity to learn more about their national association and how it works and a chance to meet the officers and directors and the committeemen who are responsible for carrying on the program of industry betterment which the Association sponsors.

AN ARCHITECT'S CHECK

(From the California Licensed Contractor)

We are indebted to Architect Russell deLappe of 1901 Downey Avenue, Modesto, for the following suggestions which set forth a manner of avoiding disputes in regard to proper credit of payment.

On segregated contract jobs, Mr. deLappe has found this method to be very successful and it is probably a system which may be applied equally well to the operations of a general contractor who might desire to utilize it.

Upon the back of Mr. deLappe's checks which are issued against the owner's fund, occurs the following:

Endorsement of the within Check acknowledges receipt of,
(Amount)
.....
as payment
(Describe which payment)
.....
to (Name of payee)
.....
on building and/or lot situate
(Describe job or location)
.....
for labor and/or material as follows:
(Give such description as may be advisable)

SCHOOL OF DESIGN

The School of Design in Chicago, 247-257 East Ontario Street, L. Moholy-Nagy, Director, announces the opening of its spring semester on February 3rd, 1941, for the day and evening classes.

The School's policy of combining the education of the designer and the architect has produced good results. The designer has developed a more thorough structural sense and the architect a more imaginative use of his resources. The students have designed and executed in the school, in the past semester, a large number of furniture models, and in the architecture department, besides the regular curriculum, they have worked on the problem of rebuilding the school farm at Somonauk, Illinois, where the summer courses are held. The same students will move to this farm in the early spring and will execute their designs so that the school principle, i.e. the integration of the academic and the workshop training will take place in the field of architecture as well.

Among the Architects

$15,000 RESIDENCE

William E. Schirmer, 1106 Broadway, Oakland, has awarded contracts and construction is under way for a two-story frame and brick veneer residence in Claremont Pines, Alameda County, for Mrs. Gimbal. Carl Walstrom, 1447 Excelsior Avenue, Oakland, is the builder. The same architect has awarded a contract to Frank Stead for a seven-room house in the Claremont Hotel Tract, Berkeley, for Mrs. Y. F. Berliner.

SAN JOSE ICE RINK

Plans are being prepared by Architect Charles S. McKenzie, Twohy Building, San Jose, for a frame and stucco ice skating rink for A. N. Winterling and Associates at an approximate cost of $100,000. Construction will be in charge of the Bridges Construction Company, 1071 Pine Avenue, San Jose.

PIEDMONT RESIDENCE

Irwin M. Johnson, 447 Moss Avenue, Oakland, has completed drawings for a twelve-room residence in Piedmont for Mr. Hayes, estimated to cost $18,000.

Mr. Johnson's office is also at work on plans for a number of new houses to be built in the Sheffield Village Tract in Alameda County.

VALLEJO HOTEL ANNEX

At a probable outlay of $150,000 a seventy-five room addition is under construction at the Hotel Casa Del Vallejo, in Vallejo, Solano County, from plans by F. H. Slocombe, 1517 Clay Street, Oakland. The new building will be six stories and constructed of steel and concrete. There will be a passenger elevator.

MORGAN HILL AUDITORIUM

Live Oak Union High School, Morgan Hill, has had plans prepared by William H. Lowe, 127 Montgomery Street, San Francisco, for a $75,000 auditorium with a seating capacity of 600. Construction will be of reinforced concrete with wood roof trusses and maple floors.

MARKET BUILDING

Leo J. Sharps, 1319 Howard Avenue, Burlingame, has completed plans for a market building on Grand Avenue in South San Francisco for the South City Meat Market. George J. Maurer of Piedmont has the contract.

ANOTHER BERKELEY H. S. UNIT

The Berkeley Board of Education has authorized the expenditure of $650,000 for a new auditorium and art wing at the High School. The plans, as in the case of recently completed units, are being prepared by Will G. Corlett and Henry H. Gutterson.

ARCHITECT BECOMES BENEDICT

Paul Thiry, architect of Seattle, and Miss Mary Thomas were married Saturday, October 26, at the Church of St. Francis of Assizi, Seahurst. The ceremony was performed by the Rev. Father John Gibboney.

The bride is a graduate of Forest Ridge Convent, Seattle, and of the College of St. Catherine, St. Paul, Minn. She is the daughter of Dr. J. S. Thomas.

Mr. Thiry is a graduate of the Ecole des Beaux Arts, Fontainbleau, France. He previously completed the course in architecture at the U. of W., where he become a member of Tau Sigma Delta, honorary fraternity in architecture.

PERSONALS

C. Frank Mahon, Tacoma, is now making his headquarters for general practice in the Puget Sound Bank Building, Tacoma. He is specializing in the design of medium-sized residences.

Howard Tollefson, associate and landscaping specialist in the office of Alvin S. Erickson, Everett, Wash., spent mid-October on a two-week holiday trip to California. He was too late, however, to see the Golden Gate Exposition.

GOVE RETURNS FROM EAST

Observation of housing conditions as well as architectural study, engaged the attention of George Gove, of Heath, Gove and Bell, architects, Tacoma, on his transcontinental tour which began August 24 and ended October 26. His itinerary included nearly all of the metropolitan centers in the United States.

KING CITY LODGE BUILDING

Preliminary drawings are in progress in the office of Charles E. Butner, 7 Winham Street, Salinas, for a $35,000 Odd Fellows' Building at King City. Construction will be of reinforced concrete.

RENO STORE BUILDING

A contract has been let for a two-story brick and steel store building at First and Sierra Streets, Reno, for the Yori Land & Livestock Company. L. A. Ferris, 557 LaRue Street, Reno, is the architect.

SAN BRUNO SCHOOL

A three-classroom addition is to be built to the Northbrae School in San Bruno from plans by Masten & Hurd, 442 Post Street, San Francisco. Estimated cost is $25,000.

COUNTY EXHIBIT BUILDING

Sonoma County will have a new exhibit building for its annual fair next year. Plans for a $50,000 frame structure are in progress in the office of William Herbert, Rosenberg Building, Santa Rosa.

SOUTHERN CALIFORNIA CHAPTER

Southern California Chapter has nominated the following officers for 1941: President, S. B. Marston; Vice-President, Palmer Sabin; Secretary, Donald B. Kirby; Treasurer, Wm. H. Harrison; Director, U. Floyd Rible.

At the Chapter's December meeting the guests included Dwight W. Stephenson, Director of the California State Department of Professional and Vocational Standards, and Langdon Post, Regional Director of the U. S. Housing Authority.

The following paragraph from the Chapter Bulletin for the current month has nation-wide interest to the profession:

"Our curiosity was piqued recently by an outspoken headline in Architect and Engineer, November number. The headline was just this: "Private Architects Get Run Around in New Federal Work." When we read it we reached for the smelling salts with one hand and our typewriter with the other. Here indeed is news. Not that the Government's going into the competition with the professions, that's old stuff, but that anyone at all should have the temerity to come right out and say so is stupendous, so long have the private practitioners taken it on the chin. And we don't think we're unreasonable, either. It's time every one of us sat down and wrote some letters to our Congressmen and our State Assemblymen and said what we think. The Institute has been going to bat as best it can, but it needs more than one voice in Washington; the Institute needs backing up. We hope this issue of Architect and Engineer gets a wide spread in Washington."

STORE AND OFFICE BUILDING

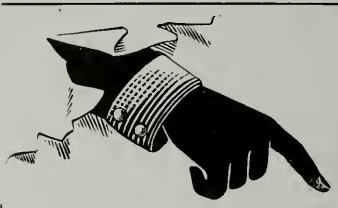
Joseph Cronan is owner of a two-story reinforced concrete and terra cotta store and office building being designed by Harry J. Devine of Sacramento and to be erected at Thirteenth and "K" Streets, that city, for occupancy by the Shell Oil Company. Cost is estimated at $150,000.

CHURCH PLANS COMPLETED

Plans have been completed and bids taken for a one- and two-story frame auditorium and Sunday school building at Fifth and "D" Streets, Petaluma, for the Methodist Church. Vincent G. Raney, 233 Post Street, San Francisco, is the architect.

NAPA STORE BUILDING

Six reinforced concrete stores with tile and plate glass fronts, composition and slate roofs, are being built at First and Coombs Streets, Napa, for Martin Stelling, from plans by Earl B. Bertz, 681 Market Street, San Francisco.



a pointer for you!

Mr. Contractor:

Are you getting your share of contracts on new construction work?

Mr. Material Man:

Are the architects specifying your goods?

Are you sure you know all that's doing in new construction work?

If in doubt and you care to join the go-getters, then subscribe to . . . .

☆

ARCHITECT'S REPORTS

PUBLISHED DAILY

Sponsored by the
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68 POST STREET • SAN FRANCISCO

A postal card will bring you free sample

ALLEGORICAL FIGURE REPRESENTING "ENTERTAINMENT" WILL DOMINATE MAIN FRONT OF NEW N.B.C. STUDIOS IN SAN FRANCISCO

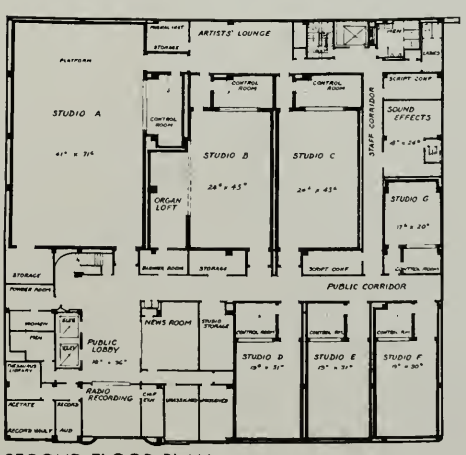
WINDOWLESS BUILDING FOR NATIONAL BROADCASTING CO.

FOUR stories high and air-conditioned throughout, the new N. B. C. Building in San Francisco for which ground breaking ceremonies were held November 14, will be practically windowless. Glass block sections will serve for both exterior trim and daylight illumination inside the building. The design will be of the modified streamline type, different from anything in San Francisco, yet not extreme to the point of being freakish or fantastic. The main entrance will be on Taylor street, near the Clift Hotel, and an imposing lobby will welcome the visitors. Seven display windows there will tell the story of radio and its program while elevators and a wide staircase lead to the upper floors.

In appearance the "NBC Building" will be simple, dignified, impressive. One wide belt of the block glass will rise at the left of the entrance and connect with a horizontal belt of the same material running the length of the structure on both streets. Other narrower bands will mark the floors, breaking the walls. At night these glass brick sections will be illuminated from within, giving an interesting distinction to the building. Along the top of the outer walls huge flower boxes will lend a colorful touch to the picture.

Except for the lobby, the street-level floor and basement will be occupied by "The Radio Garage," with space for 130 automobiles. Garage entrance and exit will be on the two streets to facilitate traffic.

The second and third floors will be devoted principally to studios, program and production departments, library, traffic and related activities, while the administrative offices will be located on the fourth floor.



SECOND FLOOR PLAN

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

478. METERS

The Brown Instrument Company's new catalogue No. 2007 has just been received. It contains data and figures on their latest Electric Flow Meters and is very complete. Send for a copy by using the handy coupon below.

479. TELEPHONES

"Intercommunicating Systems" is the title of a fine new bulletin put out by the Connecticut Telephone and Electric Corporation. Here are shown all types of bell signal systems and instruments with data concerning installation.

480. METAL TRIM

The B & T Floor Company have a new catalogue, No. 140, dealing with their metal trims, corners and coves. Detailed drawings and illustrations, together with informational data, make up a very complete catalogue. The coupon will bring you a copy.

481. PORCELAIN ENAMEL

For the users of baked or synthetic finishes the Porcelain Enamel and Manufacturing Company have an interesting broadside illustrative of "Pemco" one of this company's products. The broadside contains information on Pyroflex and gives specifications also.

482. DOOR OPENER

"The Phantom Doorman," Yale & Towne Company's automatic door opener and closer, is featured in another interesting brochure full of information and well illustrated. Send for a copy—the coupon will bring it at an early date.

483. STAINLESS STEEL

Stainless Steel for roof drainage is the topic handled in a booklet by the American Rolling Mill Company. This booklet has eight pages of specific information, photographs and drawings and is of special interest to the members of the building professions.

484. SCREENS

A nicely illustrated booklet of recent installations of "KoolShade" sun screens has been put out by Ingersoll Steel and Disc Company. These screens can be installed in homes, public and semi-public buildings. Send for a copy.

485. TOILET PARTITIONS

Another new catalogue—this one by the Sanymetal Products Company. In this catalogue there is featured five new toilet room partitions in wide ranges of finish and color. The coupon below will insure your getting a copy.

486. GRILLES

In a booklet received this month from the Cornell Iron Works a new type of rolling grilles is illustrated. Fully descriptive text and photographs comprise the pages.

487. NEW PRODUCTS

Rustless Iron and Steel Corporation have issued a very attractive booklet which shows the new products and distribution of this company. The illustrations are exceptionally good. Send for a copy.

488. ELECTRICAL PRODUCTS

Westinghouse Electric and Manufacturing Company's new Data Book for 1940-41 has been received. It is too large in the scale of its contents to describe here, nevertheless we can say that everything in electricity, or nearly everything, is listed and illustrated.

489. NICKEL-WARE

"Modern Trends in Nickel, Steel and Cast Iron Gear Materials" is the title of a brochure presented by the American Gear Manufacturers Association. To certain of our readers this will prove a very interesting item.

490. THERMOMETERS

Again the Brown Instrument Company claims some space—this time to mention another catalogue, No. 6706, illustrating pressure gauges and thermometers. It is as complete as the first one mentioned at the head of this page.

491. SIGN GLOBES

Kopp Glass, Inc., has a small broadside which folds over into the form of a tiny booklet and which illustrates their "Exit and Sign" globes. The information contained in this little sheet will be found to be most interesting. The coupon will bring your copy. Use it for any items that interest you.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

Architect and Engineer
68 Post Street
San Francisco, Calif.

Please send me literature on the follc items as checked below. This re places me under no obligation.

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My Name.....

Name of Company.....

Street.....

City.....State.....

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Bond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.00
3 ply per 1000 ft. roll	6.25
Sisalkraft, 500 ft. roll	5.00
Sash cord com. No. 7	$1.20 per 100 ft.
Sash cord com. No. 8	1.50 per 100 ft.
Sash cord spot No. 7	1.90 per 100 ft.
Sash cord spot No. 8	2.25 per 100 ft.

Sash weights cast iron, $50.00 ton.
Nails, $3.50 base.
Sash weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
City gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

SAND—	Bunker	Delivered
River sand	$1.50	$1.90
Lapis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80 and $2.20	
Del Monte white	50c per sack	

CEMENT (all brands, common, cloth sacks) $2.72 per bbl. f.o.b. car; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or deliv., 80c per sack. (Less 10c per sack returned, 2% 10th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White } 1 to 100 sacks, $2.00 sack, warehouse or delivery;

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.
(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	13/16x2¼" T&G	⅝x2" T&G	⅞x2" Sq.Ed.
Clr. Qtd. Oak	$144.00 M	$122.00 M	$141.00 M
Sel. Qtd. Oak	118.00 M	101.00 M	114.00 M
Clr. Pla. Oak	120.00 M	102.00 M	115.00 M
Sel. Pla. Oak	113.00 M	92.00 M	107.00 M
Clr. Maple	125.00 M	113.00 M	

Wage—Floor layers, $10.00.
Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$30.00 per M
No. 2 common	28.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	22.00 per M
1x4 No. 2 flooring VG	58.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	70.00 per M

Slash grain—

1x4 No. 2 flooring	$45.00 per M
1x4 No. 3 flooring	42.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.10 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded)
5/16" 3-ply and 48"x96" ..... $32.50 per M
"Plywall" (wallboard grade)—
¼" 3-ply 48"x96" ..... $37.50 per M
"Plyform" (concrete form grade)—
⅝" 5-ply 48"x96" ..... $110.00 per M
Exterior Plywood Siding—
7/16" 5-ply Fir ..... $ 90.00 per M
Redwood (Rustic) ..... 85.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $100.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot. Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M.

For smaller work average, $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work ..... per yard 42c
Three-coat work ..... per yard 60c
Cold water painting ..... per yard 10c
Whitewashing ..... per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.50
2 coats, lime mortar hard finish, wood lath	.85
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	.90
Ceilings with ¾ hot roll channels metal lath plastered	1.80
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.30
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.40
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.45

Plastering—Exterior— Yard

2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50

Wood lath, $5.50 to $6.50 per 1000.
2.5-lb. metal lath (dipped) ..... .19
2.5-lb. metal lath (galvanized) ..... .21
3.4-lb. metal lath (dipped) ..... .22
3.4-lb. metal lath (galvanized) ..... .24
¾-inch hot roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations.
$13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.60 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—

From $70.00 per fixture up, according to grade quantity and runs.

Roofing—

"Standard" tar and gravel, $6.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $6.50 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Cooper, $16.50 to $18.00 per sq. in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ..... 8.00 Square
5/8 x 16" — #1 Cedar Shingles, 5" Exposure.... 9.00 Square
4/2 #1-24" Royal Shingles, 7½" Exposure ..... 9.50 Square
Re-coat with Gravel, $3 per sq.
Asbestos Shingles, $15 to $25 per sq. laid.
Slate, from $25.00 per sq., according to color and thickness.
1/2 x 25" Resawn Cedar Shakes
10" Exposure 10.50
3/4 x 25" Resawn Cedar Shakes,
10" Exposure 11.50
1 x 25" Resawn Cedar Shakes,
10" Exposure 12.50
Above prices are for shakes in place.

Sheet Metal—

Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)

Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural

$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—

$80.00 to $120.00 per ton, set.

Stone—

Granite, average, $6.50 cu. foot in place.
Sandstone, average Blue, $4.00. Boise $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts corner center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc. — (See Dealers)

Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—

40c per square foot and up. Installation extra.

SAN FRANCISCO BUILDING TRADES WAGE SCALES

All crafts 8 hour day (except as otherwise noted) and 5 day week. Effective as of May 1, 1940.

CRAFT	Journeymen Mechanics
Asbestos Workers	$10.00
*Bricklayers	10.50
*Bricklayers' Hodcarriers	7.50
Cabinet Workers (outside)	10.00
Caisson Workers (Open)	8.80
Carpenters	10.00
Cement Finishers	10.00
Electricians	11.00
Elevator Constructors	12.00
Engineers (Portable and Hoisting)	10.00
Glass Workers	9.68
‡Housesmiths, Ornamental Iron (Shop and Outside)	10.00
Housesmiths, Reinf. or Rodmen	10.50
Ironworkers (Bridge and Structural—Engineers)	12.80
Laborers (Building and Common)	6.50
*Lathers	9.60
Marble Setters	10.50
Millwrights	10.00
Mosaic and Terrazzo Workers	8.00
†Painters	8.75
Pile Drivers and Wharf Builders	11.20
Pile Drivers Engineers	12.80
*Plasterers	10.00
*Plasterers (Hodcarriers)	8.40
Plumbers	11.20
Roofers	10.00
Sheet Metal Workers	10.00
Sprinkler Fitters	11.00
Steamfitters	11.00
Stair Builders	10.00
Stone Cutters	9.00
*Stone Setters	10.50
Tile Setters	11.00
Welders, Structural Steel Frame on Buildings	12.80
§Dump Truck Drivers, 2 yards or less	7.00
§Dump Truck Drivers, 3 yards	7.50
§Dump Truck Drivers, 4 yards	8.00
§Dump Truck Drivers, 5 yards	8.00
§Dump Truck Drivers, 6 yards	8.50
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	8.00
3 yards	8.57
4 and 5 yards	9.14
6 yards	9.71

EXPLANATION:

*—6 Hour Day.

†—7 Hour Day.

‡—Term "Architectural Iron" no longer used. This craft "Ornamental Ironworker."

§—Dump Truck Drivers work 7 HOURS ON PUBLIC WORK, 8 HOURS ON PRIVATE WORK; starting time 7:30 A.M.

Since "Hospitality" will be the definite rule, interest for the visitors has been worked into the efficient layout on all floors. For instance, the radio recording room will be visible through double glass from the second floor lobby and will be an outstanding show spot. Another interesting feature in this lobby will be a view into the news room, with teletype printers bringing hot copy from the four corners of the earth and editors weaving this material into news broadcasts.

Visible from the third floor lobby will be the three transcription studios, the master control room or nerve center of the plant, and the traffic department where the complicated programming operations are performed. Through the carefully studied plan, the first, second and third floor lobbies will be fascinating points from which to observe some of the most vital and interesting activities of broadcasting.

Also on the second floor will be script conference rooms, sound effects room, artists' lounge, record vault, Thesaurus library and necessary service and storage rooms. Occupancy of the third floor will include offices for the chief engineer, production manager, producers and writers, announcers, the telephone switchboard, etc.

All of the fourth floor will be occupied by offices. These include general manager, sales manager, program manager, sales traffic, sales division, a large clients' audition room, sales promotion, publicity, artists' service, education department, auditor, audience mail, outgoing mail and kitchen.

Each studio will have its own control room and above the control room in the two-story studios will be rooms from which clients can watch programs in progress. All studios open to the public will be easy of access and it will be possible for artists, musicians, announcers, sound effects staff and others on the programs to reach studios without confusion of interference.

Looking beyond the immediate requirements, careful thought has been given to the possible needs of television and frequency modulation in the future.

Albert F. Roller is the architect and Barrett and Hilp the general contractors.

A. S. ALSCHULER, ARCHITECT

Alfred S. Alschuler, nationally famous Chicago architect, died on November 6 of a heart ailment. He was 64 years old. Mr. Alschuler began his architectural career in Chicago in 1899, and had designed many of its buildings and synagogues. Among them are the London Guarantee and Accident, and Harvester buildings, the Chicago Garment Center, Mercantile Exchange building, Sinai Congregation, Temple Isaiah, and the North Shore Congregation Israel, in Glencoe.

Mr. Alschuler was credited as first architect to use reinforced concrete construction in Chicago, and contributed various inventions to the field of building construction.

1941 A. I. A. CONVENTION IN CALIFORNIA

Plans are going forward in a satisfactory manner for the 1941 A. I. A. Convention scheduled to be held in the Yosemite National Park the week of May 18-24. The Institute journal, "The Octagon," prints the following advance information about the convention in its last issue:

"The idea of going to California for the 1941 convention was first put up to the members in the 1940 March issue of 'The Octagon' and seemed almost universally acceptable. So much so, that last May the Board announced the plan to the convention at Louisville and the convention approved it.

"Since then arrangements with the railroads and the Yosemite management have progressed sufficiently to make the announcements that follow.

"Special, personally-conducted convention trains will be run from Chicago to the Yosemite and then to Los Angeles, with side trips en route to Taos and Santa Fe in New Mexico, to Grand Canyon in Arizona, and to Boulder Dam. Four days at Yosemite will be followed by three days at Los Angeles, then by regular train to San Francisco, stopping at Santa Barbara and Del Monte and Carmel en route. The validation point for return tickets will be San Francisco and return trips from there will be via Salt Lake and Denver, via Portland and Seattle, via Los Angeles and El Paso or via Santa Fe, as the delegate has selected.

"Members of the Utah, Montana, and the Colorado Chapters will join the trains at La Junta, and continue with the party therefrom. Members of the Arizona Chapter will meet the trains at Grand Canyon and continue thereon.

"Members of the California Chapters and of the Oregon, Washington State and Spokane Chapters will meet the party in the Yosemite. The members of the Southern California Chapter will be the hosts in Los Angeles. The San Diego Chapter will be host in San Diego, which will be an optional side-trip from Los Angeles. The Santa Barbara Chapter will be host at Santa Barbara, and the Northern California Chapter at San Francisco. One full day of conducted sightseeing, with local members as guides, is planned in both Los Angeles and San Francisco. The final dinner will be in Los Angeles.

"The State Association of California Architects will collaborate with the California Chapters as hosts of the convention."

FOR ENGINEERS

Opportunities for work as Junior Engineering Aid and Senior Engineering Aid in the construction and maintenance of California's highways are announced by the State Personnel Board. Examinations for these jobs have been scheduled for December 28.

Housing Shortage — Utilization of Existing Structures Urged

THE chief housing task of the government is to utilize the present supply of dwellings to the utmost, Dr. Edwin S. Burdell, director of Cooper Union, declares in proposing a three-point program which includes a rehabilitation of existing structures, greater flexibility in applying Federal subsidy, and cost reductions to attract private capital.

"The emphasis which has been placed upon Federally subsidized housing construction has tended to deflect public interest from realization that millions of families must continue to live in existing housing for years to come," says Dr. Burdell, who has long been identified with city, state and Federal planning activities. "Regulation of the existing housing supply is, therefore, the most important housing function of the government.

"Maximum utilization of existing housing, through repair and rehabilitation must not be neglected for programs of housing construction. It is less costly—and also less dramatic—to repair existing buildings, remove rubbish, clean up vacant lots, demolish vacant and abandoned buildings, remove structures that block light and air from other buildings, remove partitions from windowless rooms, install private toilets, fire-retard halls, stairways and cellar ceilings; erect fire escapes, exterminate vermin, ratproof new and old buildings, and put plumbing in good order.

"Programs for the demolition and rebuilding of slum areas, or building to add to the supply of low-rent houses, must go hand in hand with the regulation and most effective utilization of the present housing supply.

"Further encouragement should be given to private enterprise through remission of taxes and cheap loans when owners agree to limit rents to prices the original occupants can afford to pay and when properties are certified annually as being in compliance with the law."

The present Federal housing program is useful as a demonstration but can never hope to fill more than a fraction of the need, Dr. Burdell holds. "However, until wages and family incomes, on the one hand, are raised, and costs of construction, on the other hand, are lowered, there is no alternative but to face the fact that family incomes, for the lower income groups, are too low to secure desirable shelter in privately owned housing," he adds. "Even in large-scale Federal housing projects some form of rent subsidy to the local authority has been found necessary in order to bring the projects within reach of those they are intended to help.

"The present method of applying the subsidies on a flat rate to the buildings causes a stratification of families of the same low-income group. It fails to accommodate those families of low incomes who either have slightly less or slightly more than the income limits determined by USHA, and it forces back into the slums many of those whose earnings increase.

"The housing subsidy should be adjusted by local housing authorities, so that those families who need subsidy less will receive the least subsidy or will be required to pay an economic rent, and those families who require the largest subsidy will be enabled to live in a project. A flexible rental policy, known as a Rent Rebate System, long in use in England, is needed here to assure justice to the rehoused tenant."

Housing for the moderate-income group could yield sufficient return to private capital if certain reductions in the original cost of housing and in annual charges for operation and maintenance could be accomplished, Dr. Burdell points out. Reductions in the original cost of housing for the lowest and moderate-income groups, he submits, might be possible in three ways:

"Through housing societies which could raise money at low interest rates from private sources in order to secure the advantage of centralized management of re-conditioned property; further development of limited dividend companies; encouragement of housing cooperatives for the skilled and white collar workers.

"Through reduction in building costs: building materials distributed at wholesale costs; lower interest and longer amortization rates; standardized specifications; year-round construction; guaranteed annual wage for building trades employees; economical site and space use; expanded use of labor-saving devices at building sites; factory fabrication of larger units.

"Through government cooperation: simplified and modernized building codes to eliminate unnecessary costs; prevention of land speculation and urban deterioration through adequate zoning, city planning, and planned state and municipal control or ownership of land."

Any reductions in housing construction costs that can be accomplished should also inure to the benefit of the lowest income group by increasing the volume of low-rent housing that can be constructed from public funds, Dr. Burdell concludes.

PLAN OF WASHINGTON

(Federal Architect)

In the July issue of "House and Garden," Alfred Kastner, a Washington architect, approaches the subject of the plan of the City of Washington with the promise: that had the $50,000,000 which has been spent on monumental construction in Washington been placed in his hands, he would have spent it in a better and more useful manner and produced a better and more beautiful city.

That theme in itself isn't any too interesting or inspiring, since any self-respecting citizen would be willing to assert that he could improve on the plan of Washington or any other city, if given funds and a free hand. But Mr. Kastner touches the subject lightly and, we suspect, with not a little of the Shavian desire to shock and bewilder people by offering, in a serious manner, a scheme radically different from the one that has been advocated by studious persons over a long period of time. It is a good idea; since the mischievous public is never averse to hearing that great persons (like L'Enfant and McKim) have been overpraised and were actually pretty far gone on the dumb side.

Mr. Kastner's treatise obtains flavor by offering at once an entirely new focal point and piece de resistance for the city, of a kind certainly never thought of before for such a position and purpose. As we understand it this focal point is to be an eating house, with dance-hall attached for tourists and Government employees. It is to be in the very center of the Mall and is to be popular priced, so that the man on the street and his children and aunts can assemble and not have to go all the way out to Glen Echo. This is good. The Mall needs more paper-bags, ice cream cones and pop bottles.

As an adjunct to this, presumably connected by arcade or tunnel, would be the Smithsonian Gallery of Art for Living American Artists, so that citizens could wander from eating house to gallery in search of good, clean fun in the one and uplift in the other, with perhaps a little of both in each.

The next step in this serious city planning would be slum-clearance, in which dens of squalor and homes of disease where Government workers now abide would be razed and in their places would be built clean, healthful apartment houses within walking distance of the present locations of Government buildings (which in a later time are to be moved to the suburbs).

Traffic conditions would then be improved. Mr. Kastner states that the traffic condition is "quite serious," and something should be done about it. He gives voice to this, "The solution would be a system with all modes of transportation allotted their ordered courses and tight spots relieved by rapid transit."

Later on he has a better truism: "The city is a relatively static thing as compared to its population, which has certain dynamic qualities. Human life is governed by time! its very nature is the expression of flux." A very beautiful way of saying that people move more frequently than masonry.

The next step was to be that, having taken the Government workers out of their slums and established healthful housing for them within walking distance of Government buildings, the various Government Departments and agencies would then be moved to the suburbs, following the example of the Bureau of Standards.

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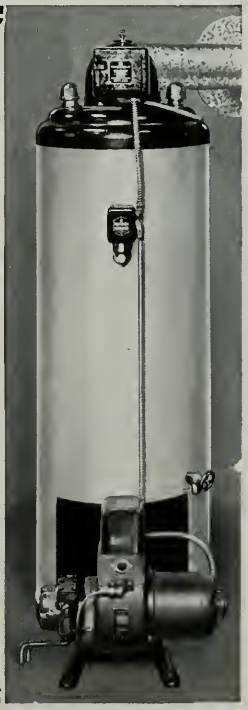

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buildings at Rockefeller Center and flashes a photograph of that group to show the type of buildings that would be constructed at outlying points, in preference to the low Triangle buildings, which he dislikes.

Having thus housed the Government Bureaus in skyscrapers in the open spaces he emphasizes his transportation system to the center of the city.

He now perceives that he has so revolutionized the city plan that all he has in the center of town is a tourist restaurant and a dance hall, with quick connection to an art gallery, a transportation terminal and the slum-clearance projects.

This will never do. There must be a city. What to do? Just as we were about to give up, he lays three honor cards on the table. He would build a National Symphony Orchestra Building, a National Opera House and a Federal Theater. Three deficit possibilities!

The whole thing is so complete and well-considered and its absurdities presented with such composure and in such sober language that it is a masterpiece of its kind. As a by-product, its burlesque suggestions for improvement call attention to and emphasize the essential completeness and desirability of the L'Enfant plan and its developments.

LANGLEY SCHOLARSHIP FOR 1941

The American Institute of Architects from January 1 to March 1, 1941, will receive proposals of candidates for Edward Langley Scholarships for the year 1941.

Awards will be announced about June 1, 1941.

Awards may be made to residents of the United States or Canada.

These scholarships are awarded annually for advanced work in architecture, for study, travel, or research, as the holder of the scholarship elects. Awards to undergraduates are precluded, but awards may be made to architectural draftsmen who desire to do undergraduate work or take special courses in architectural schools. An award in a succeeding year to a holder of a scholarship is not precluded.

Competitive examinations will not be used as a method of selection.

The scholarships are open to all persons engaged in the profession of architecture.

Proposals must be made on A. I. A. Form blanks (S70) which may be obtained from the Institute, 1741 New York Avenue, Washington, D. C. No proposals will be received after March 1, 1941.

BAY REGION ARTISTS WIN

The national competition conducted for the decoration of the six steamships of the American President Lines has resulted in awards to two Bay Region artists, Karl Baumann and Miss Esther Bruton. Mr. Baumann was given the contract for oil murals—bar panels—in the S.S. President Hayes and Miss Bruton will design the hall overmantle of the S.S. President Garfield, decorations being glazed gold and palladium leaf on Vehisote.

PACIFIC NORTHWEST ECONOMY SITUATION

IS THE economy of the Pacific Northwest unbalanced? If so, is this harmful? What effects may be anticipated from present programs—including that of national defense? These questions are of timely interest in the region because of new power developments, new industries and new emphasis on the importance of added raw and manufactured materials in the national security.

A memorandum statement released by the regional office of the National Resources Planning Board* at Portland, Oregon, throws some light on these questions, in stating preliminary conclusions of current cooperative studies: The Pacific Northwest economy is unbalanced—that is, too highly dependent upon certain resources and extractive industries; continuation of past conditions and trends will lead to serious difficulties because of depletion of natural resources; there is need steadily to expand and diversify the region's commodity-producing industries. Further, establishment in the region of new industries essential in the defense scheme may be an important factor in broadening the base of the regional economy—as well as in providing a more balanced distribution of national industrial activity.

The region's economy is very largely dependent upon activities that stem from its farms and forests. Together these two spheres of economic opportunity account for 37 per cent of the total gainful employment. Taking into account service industries fundamentally dependent upon them, it may be concluded that not less than 75 per cent of all employment in the Pacific Northwest now rests upon the production of its farms and forests. A similar picture of dependency is obtained through study of the external trade of the region. The value of outgoing commodities is made up of farm and forest production to the extent of over 80 per cent, while manufactured products make up three-quarters of the value of incoming goods. In all manufacturing activities, except those relating to agricultural and forest products, regional production is far below the national average.

The threats to the continuing well-being and security of the region are serious. Resources of land and forests are not yet managed on a sustained yield basis. Natural resources are being used up to provide the present income and standard of living. Soils are being worked out more rapidly than they are being replaced. A number of timber districts face the loss of their major means of support; even the region as a whole faces a crisis a generation or so hence when the available supply of old growth timber will be seriously reduced and new growth will not yet be adequate to provide forest-supported economic opportunity at present levels.

If the Pacific Northwest economy is to become more secure, action is needed along a number of lines: More

*R. F. Bessey, regional counselor; B. H. Kizer (Spokane), regional chairman.

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economic use must be made of resources of skilled labor, science, technology, capital. Two of the three principal props to the economy must be maintained through rehabilitation or replacement of worn-out lands and depleted soil elements, and continuation of land reclamation; and through establishment of sustained yield management, more complete and advanced use of forest materials. The weak third prop—manufacturing—must be strengthened through expansion and diversification of commodity-producing industries—with more complete utilization of such material resources as power, minerals, low-value or surplus agricultural products, and now-wasted forest products. It is not suggested that each region of the country should be a self-sufficient economy but that it should have as broad a base as its resources will permit.

A number of factors are conducive to industrial expansion in the Pacific Northwest, for example: materials for many wood product, agricultural, chemical and metallurgical industries; large quantities of low cost electrical energy on an extensive transmission network. While a large consuming population is lacking, there are potential Pacific Slope and home markets for a number of industries.

That a new trend—toward closing the gap in the economic base of the region—may be actually under way is indicated by the recent establishment of new basic industries. This new development, essential to more secure national and regional economies, brings with it new opportunities for increased employment, investemnt and dividends, and also new problems which call for study, research and constructive plans and action.

The problem of new industry concerns all parts of the Pacific Northwest. Widely available hydroelectric energy will encourage a degree of decentralization not otherwise practicable. The location and establishment of new industry should be adjusted to the lasting economic and social needs of the region, as well as to the requirements of immediate defense.

RUNNING FIRE

(Continued from Page 1)

by generous libations of rock and rye." No doubt his cold prevented him from realizing that my old fashion was not rock and rye.

• *STAND FAST*

Don't let them fool you. Think of the years of undergraduate study when you slaved, with **pen** in hand, at your dimly lit desk. Think of the years you spent over the draughting board, shoving a **pen** for some architectural Scrooge. Think of the years that dragged by while you hoped to **pen** the final clause of a contract for a $10,000 fee. Think of the years you spent dreaming of the day you could dip your **pen** into the alembic of the immortals, the Michelangelos, the Raphaels, the Paul Crets.

No, don't let them fool you, not even if they use "goodness" ten times in every broadcast. I tell you, there is no leakless fountain pen.

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LAW AFFECTING CONTRACTORS

Proposals for far-reaching changes in the California State laws and in the Contractors' Act have been made by numerous construction organizations. In some instances the changes desired or the new laws suggested have met with universal approval and in other cases groups or sections have questioned the advisability of the proposals.

In the past the construction industry, through its various groups and spokesmen, has frequently gone to the Legislature for assistance, but the efforts have not been correlated and out of the confusion that has arisen the industry has gained less than it would have otherwise received.

In order that the entire industry may be aware of the various proposals to be presented to the Legislature, and also in order that the industry may rightly support those proposals which are found to have general approval, a conference of various contractors' organizations in the State was held at Fresno September 21 and as a result of the meeting, an organization known as the California Contractors Legislative Council was established. The chairman and secretary chosen were respectively W. C. Tait and George Sharp.

600,000,000 BRICKS IN HOMES

More than 600,000,000 bricks are being used in the approximately 102,000 homes now under construction or completed in the United States Housing Authority low-rent public housing program. More than one billion bricks will have been used when all of the 160,000 projected homes in the current USHA program are completed, together with about 230,000,000 lineal feet of structural tile. In addition, USHA technicians estimate, these 160,000 projected homes will require about 400,000,000 feet of lumber and 1,500,000 gallons of paint.

BRITISH STILL PAINTING UP

Painting must go on in Britain, despite the difficulties and dangers of the times, declares an editorial in the October edition of "The Decorator," British painting and decorating trade journal. The article describes how a

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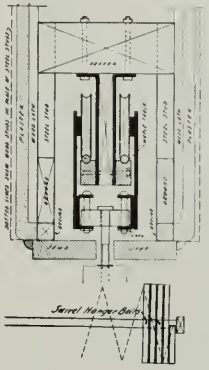

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London correspondent of a leading provincial newspaper, in reporting the effects of air raids on the metropolis of London, told of a sight which impressed him greatly. He visited a street the morning after a bomb had fallen on it. Four small homes had been badly damaged; a fifth was apparently untouched, and decorators were already at work washing down the front preparatory to repainting it.

It would, the article states, be idle to pretend that much such painting is being done in London, although in the last few weeks there has been a certain amount of making good the damage caused by the bombs. However, in other parts of the country a surprising amount of painting and decorating is being carried out—far more than could have been anticipated under the circumstances. Much of the work is a direct result of the war, with camouflage as the main item, but withal there is still a fair amount of straightforward painting.

NEW TESTING LABORATORIES

Plans are being completed for new analytical control laboratories at the headquarters plant of the Merck company at Rahway, New Jersey. It is announced that the laboratories will be unique in their class in the United States. The control division which will occupy the new building is responsible for testing all raw materials, ingredients, products, and packages for the company which turns out some 3,000 separate items in 13,000,000 containers per year.

Original features of the new laboratories are the result of extensive studies of operation and function made by the laboratory staff in cooperation with the company's industrial engineers. Most striking feature is in the design of chemists' laboratory tables which are in the form of a cross. Each of the four angles is designed to provide a working area for one chemist whose writing desk will be within the individual angular area. Opposite ends of each cross will be assigned respectively to sinks and to compartments for clean glassware and balance areas for weighing samples. A fume "hood" will rise from the intersection and will provide individual access

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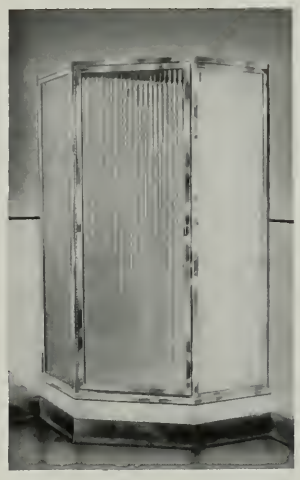
PROGRESS OF FRIANT DAM

Construction activity at Friant Dam, after a year of work, is approaching a peak with concrete pouring operations being expended on a rapidly increasing scale at the base of the dam site in the old San Joaquin River gorge. Meanwhile at the top of the Fresno County abutment a 500-foot section comprising the southerly end of the dam is virtually completed.

The lowest point of sound bedrock in the dam site is at elevation 262. The crest of the dam is to be at elevation 582. The difference—320 feet—makes Friant Dam 20 feet higher



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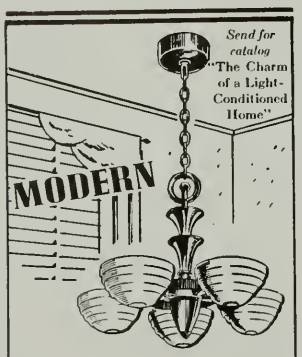

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than the tallest building in the San Joaquin Valley, which is Fresno's Pacific Southwest Building. Friant Dam will be 3,430 feet long.

Turned out of its natural channel by an upstream cofferdam and dike, the San Joaquin River is flowing through a temporary diversion channel along the south bank, crossing the dam site excavation on a big wooden flume. Later in the season, when the winter flow exceeds the 10,000-second-foot capacity of the flume, the river will be diverted again into three plate-steel conduits, each 14 feet in diameter and about 200 feet long, which soon are to be installed in the base of the dam.

The general contractor is rushing work night and day in an effort to get concrete poured around the diversion conduits before the flood season.

Concrete is dumped into the forms, eight tons at a time, from four-yard buckets lowered into place by large traveling cranes which move along the construction trestle still being extended across the dam site. The loaded buckets are brought out on the double-track trestle by diesel-electric trains constantly running back and forth from the mixing plant high on the south side of the canyon.

The structural steel trestle, which will be 2,200 feet long, is about two-thirds completed with erection proceeding from south to north. In the middle of the canyon the tallest towers are over 200 feet high.

To relieve congestion on the deck of the main trestle, a single-track service trestle about 70 feet high has been built across the canyon just below the big trestle. Supplies of reinforcing steel, cooling pipe, machinery, equipment, and materials other than concrete are brought out on the service trestle from which they can be picked up by the cranes on the main trestle.

Thousands of board-feet of lumber for erection of forms are moving into Friant by railroad. Trainloads of cement and other supplies are being delivered almost daily.

Friant Dam will contain 2,200,000 cubic yards of concrete. About 75,000 yards have been poured to date, including 50,000 yards in the almost-

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completed section at the top of the south abutment. Block 17 at the north end of this section stands 120 feet high, affording a good profile view of the dam under construction.

About 25,000 yards of concrete have been placed in the base of the dam in the foundation of the spillway apron just below the central portion of the dam.

TWO-STORY ROW HOUSES

The two-story row house is the most popular type of construction in the slum clearance low-rent housing program of the United States Housing Authority, according to statistics on 244 low-rent public housing projects recently compiled.

Of the 90,436 dwellings under construction or completed throughout the country, up to August 1, 47,921 are of the two-story row house type. Three-story apartments, numbering 16,903 are next in favor. Altogether, there are 62,639 homes in row houses and flats against 27,597 in apartment buildings. The fact that the majority of USHA projects are in medium-sized towns is reflected by the comparatively small number of apartment buildings.

Coal and gas are equally in demand for heating fuel, each being used in 83 of the projects tabulated. Oil is being used in 59, purchased steam in 5, coal and gas in 1. In 13 projects located in some sections of the south no heat is provided.

STANDARDIZED WINDOW COSTS

Standardized wood windows and steel casements selected and recommended by United States Housing Authority technicians is expected to save thousands of dollars this year in the cost of constructing low-rent public housing projects.

Already 16,000 of these standard windows have been used in five USHA projects, and 6,400 with slight variations have been installed in five other projects. It is estimated that the savings in cost of materials and expense of installation average about $1.00 per window.

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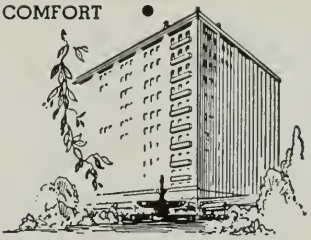

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WANTED: A FAIR SUBSIDY POLICY

AN appeal to the United States Authority to prepare and to make public a formula for the granting of housing subsidies, is voiced in a special editorial in a recent issue of "Public Housing Progress."

"Can not the USHA show us for each town where it operates," the Conference asks in its editorial, "that a standard house on which maximum subsidy is paid will cost the taxpayers so many dollars per year, producing such and such a rent and serving families with such and such an income? Then can not they show what rent and what income half or a third of that maximum subsidy would reach in that same town? If that is done, the local people can easily see whether both of those limits lie within the local potential market for public housing, i. e.—families for whom private enterprise does not produce housing of the American health-and-decency standard. They can also decide whether they want to cater in this year's building program exclusively to the casuals and unemployed who will require maximum subsidy, exclusively to the low-income employed who can be served with minimum subsidy, or to some of each, addressing themselves to a rough cross section of the market."

Such a formula is recommended by the Conference as a means of removing the lack of information and the mis-information which have caused passage of the Housing Act amendments, outlined in Senate Bill 591, temporarily to be stymied in the House Rules Committee. While the editorial stresses the regrettable fact that a fixed maximum subsidy was not originally stipulated in the Housing Act, when passed in 1937, the belief is expressed that clarification and publication of a consistent subsidy policy by the USHA will remove the uncertainty by which the friends and foes of public housing alike are at present befogged.

Posing the question, "Why is it that the ill-fated S.591, which would assure the continuance of the program, although passed by the Senate, still slumbers in the Rules Committee of the House of Representatives?" the editorial states, "It is not because the USHA and the local housing authorities have not built good houses in good lay-outs. The record is excellent.

"It is not that families of very small income previously living in slums have not been accepted as tenants. They have. Or that these families do not like their new homes. They do."

The necessity for a public declaration by the USHA of its policy with regard to housing subsidy is offered as the main answer to the question, "What's the matter with S.591?"

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ARCHITECT
ND
ENGINEER

JANUARY, 1941

★ At Stephens College (Columbia, Mo.) Sloan Star Valves are installed throughout eight dormitories, varying in age from six months to six years. *As yet not a single repair part has been purchased or needed.*

★ At Washington University (St. Louis, Mo.) Star Flush Valves have been installed in the Physics Building for three years, the Architectural Building for five years, and the School of Fine Arts for six years. *As yet no repair parts have been purchased or needed.*

★ *Architects:* Jamieson & Spearl, St. Louis, Mo.

★ In the 258-family Neighborhood Gardens Apartments (St. Louis, Mo.) Sloan Star Flush Valves have been operating for six and one-half years. *As yet no repairs have been purchased, no valve has been re-adjusted, not even a cover has been removed.*

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★ *Architects:* Hoener, Baum & Froebe, St. Louis, Mo.

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RUNNING FIRE

By MARK DANIELS

• *THE LITTLE MAN*

As his foot slipped off the brass rail, a button popped from The Little Man's bulging coat, followed by an avalanche of small books. "This asinine war," he said as he rose from picking up the books and his wet umbrella, "has ruined the Baedeker business. Now you can't tell whether your hotel bill will be in marks or lire, in francs or shillings, in rubles or drachmas. If you visit France you don't know whether to take a German, French or Italian dictionary and you can't carry all three. I haven't sold a Baedeker in three months, yet this is the time when everyone needs a guide book and I am going to get out a new one. With the Greeks pulling another Thermophylae a guide book to Mt. Olympus will sell in vast numbers. I will start another industry besides restaurant keeping — sight seeing tours to Mt. Olympus. 'See the homes of the gods; visit the thunderbolt works; hold the hammer that conked Zeus when Vulcan played midwife; watch Aphrodite rise from her champagne bath; send a collect message by wing-footed Hermes; hear Phoebus play the La Conga on his 18 karat harp; eat an ambrosia sandwich and wash it down with a dipper of nectar. A tour to the homes of all the gods for 10,000 drachmas, including guide.' I know them all and can give the tourist the low down, the dirt, on each one of them. It will be profitable. Hollywood pays big dividends on the same idea with one tenth the attractions. I'll take the tourist to the homes of each of the 12 Dii Majores and 12 Dii Minores except that of Pluto; which reminds me— change that old fashion to blackberry brandy."

But the O'Brien wasn't quick enough so my check was for three drinks.

• *CONTRADICTIONS*

My Chinese friend, whose philosophy and keen insight is a source of great pleasure to all who know him, was commenting on the often repeated statement that the age of a woman can be fairly accurately judged by her face, her hands and her figure considered together. I said I believed that was true. "Well," he replied, "If she has a 25 years old face, 18 years old hands, 35 years old hips and a 50 years old bust how many years do you give her?"

• *RESTRAINT*

How often we find that lack of restraint has relegated an otherwise chef-d'ouvre to the limbo of failures! Literary works, become verbose, dramas and radio programs are "overdone" and architectural work becomes a mass of gingerbread.

There is nothing to fear in leaving a stretch of wall undecorated. Churriguera no doubt was sincere but one feels that he was afraid a plain surface would bite him. In the old days it took six acts of five scenes each to stage a drama that is better done today in a single act.

Unquestionably the tendency to add a little bit more is strong in most of us. If one plant in a garden is lovely perhaps two will be twice as lovely. If the bouillon is perfectly seasoned perhaps a dash of catsup will make it pluperfect. Yes, there are those who salt their anchovies.

• *LOST AND FOUND*

Why must every rose have its thorn, every cake its cramp or any other way you want to express that age old idea? But it seems to be true.

A few nights ago we were dining at a hotel where they dance. There was a particularly beautiful girl on the floor who, despite her awkward partner, danced exquisitely. Suddenly there was a little commotion and the graceful girl limped off the floor. She had lost one of her studded heels.

Half an hour later my wife said "Do you remember the girl who lost her heel?" I nodded. "Well," said my wife, "She's found him."

• *INDEPENDENCE*

You don't have to be perverse, stubborn or self-willed to be independent in thought, although a great many think you do, or rather they mistake perversity for independence. There is nothing more essential to excellence in creative work than independence, freedom from influences that might destroy individuality. But when this is carried to the extent that precludes the adoption of slight suggestions it becomes ridiculous perversity.

A creator in any of the arts is entitled to all the intelligent criticism and suggestions he can get. They may help him to solve his problems in an entirely original way which, although the solution may have been inspired by another, is still his own. I know an architect who will sit up nights trying to find out what he calls his own original solution to a problem merely because the only practical way was suggested by another architect.

I also know a man who used to dictate notes to himself as memos or reminders. They would read "Go to library today," or "See Jim B. Tomorrow." When I learned that he had stopped the practice I asked him why. "I'm a man, not a mouse," he replied, "and I'll be damned if anyone is going to dictate to me."

Some independence, I'd say.

• *THE CONNOISSEUR*

No employees were in my office when I returned from lunch today. In the drafting room, however, was the window washer, but his brushes were idle. He was poring over some large reproductions of chateaux and gardens in France. They were particularly beautiful and I was worried for fear he had smudged them. "Be careful," I shouted, "don't soil the plates." "Non, non Monsieur, I be ver' careful; you see, thirty year ago I live there." I have just learned that he was telling the truth and knew as much about French chateaux and gardens as many architects do.

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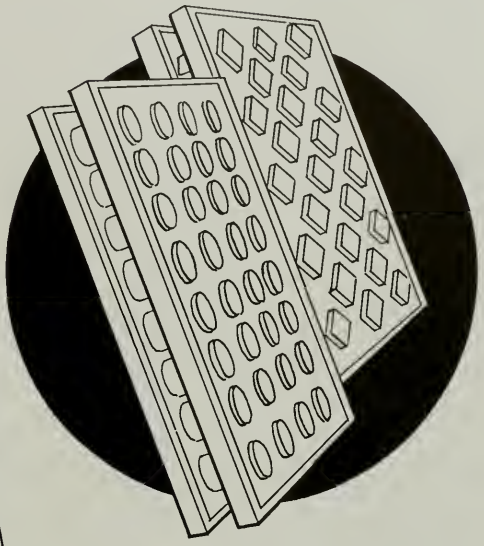

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MODERNISM AND TRADITION

Modernists will doubtless enjoy reading what Professor Frank W. Applebee of the Alabama Polytechnic Institute has to say about "Modernism and Tradition" in a recent number of The Auburn Forum. It indicates fresh inroads for the moderns:

"Those who do not understand modernism in art constantly assert that the modernists are contemptuous of tradition. This is an erroneous idea.

"The real modern has the greatest respect for the creators of all the past ages, and believes that his regard for them rests on a more genuine and less superficial basis than does that of the conservative.

"No great master was ever a copyist or an imitator. Art has to do with creation. Imitation is the antithesis of creation and of art. Those who have the modern view believe in following the spirit of the past masters but not in the superficial copying of particular techniques, forms and outlooks. Modern artists, accused of being out of line with tradition, feel that they are much more in the great procession than are the conservatives. The latter, those who cling to Nineteenth Century ideas, are the ones who seem really out of line.

"There is no revolt against artistic tradition; there is simply a revolt against the Nineteenth Century's blind worship of tradition. The complacent, conventional Victorians, seeing only the surface and not the substance of great art, got the artistic caravan off the road. Men of the new school want to put it back.

"The machine, through misuse, was the chief factor in causing the wrecking of Nineteenth Century art. Mechanized mass production gradually replaced craftsmanship. Wealth and power, which had proviously been controlled by artistocrats, came into the hands of men who had less well developed tastes. The new men of means desired the same fine surroundings that the nobility had possessed but, not having the same sureness of artistic judgment, they felt safer in relying upon what had been considered good in the past. The demand for original creations dropped constantly. Antique collecting flourished and the demand grew for reproductions of old building and furnishings. Imitation was called 'art.'

"When the painters were not imitating Rapheel, they were imitating Nature. Sculptors imitated Phidias (or thought they did) and architects imitated the Romans, Greeks and Goths. Eclecticism ruled the academies, the theory being that civilization had done all the creating it could and that there was nothing else to do but to choose the best from all the past ages. It was a 'safe,' unadventurous way, much at variance with the procedure of the great periods.

"Each style was carefully labeled and pigeonholed. Art writers told the public (as they still do) that harmonious homes would result from keeping periods straight. American Victorians could see nothing ridiculous in the idea of having Louis XV parlours, Turkish dens and Eighteenth Century Spanish dining rooms. Sometimes styles would be mixed, but everyone tried to do what was proper. After all, anything old or from distant places was good.

The Reredos and Altar, cut from Texas stone, were recently installed in St. Luke's Church, St. Louis. The architects, Study and Farrar, were influenced by the Reredos of Winchester, St. Albans, and Christ Church Cathedral, St. Louis. The figures were cut directly in the stone without the use of plaster or clay models.

"Conservatives of today have condemned many and modified all of these ideas, but still cling essentially to the habit of copying of outworn forms. The genuine conservative remains very period conscious. The modified conservation is more free in making adaptations but can't quite break loose from copies and imitations of egg and dart modelings, Colonial fireplaces, Chippendale furniture, and stereotyped filigree of one kind or another.

"At the New York Fair last year, 40 per cent of the public showed itself, by vote, to be in favor of the modern home and against the period style home. A few years ago not half as many would have supported modernism. The conservative feels that the world is losing its safe standards. The modernist feels that it is getting back into the adventurous creative spirit of the great ages of the past."

ROSENBERG TRAVELING SCHOLARSHIP

The President and the Board of Directors of the San Francisco Art Association announce they will receive written applications for the second Abraham Rosenberg Traveling Scholarship Award up to March 15.

To foster art in America, the late Abraham Rosenberg bequeathed an endowment fund to be given in Scholarships to gifted students for extended study in painting or sculpture. Its purpose is to assist exceptional persons who have already demonstrated their ability to accomplish distinguished creative work of professional standing.

Although the Scholarship is intended for study abroad, it is not strictly limited to this field. Applicants desiring to pursue special research in this country will be considered.

General terms of the Scholarship require that the applicant shall have been registered in the California School of Fine Arts for at least two semesters, and shall have completed original work in painting or sculpture. Applicants shall be between 25 and 35 years of age, although exceptional persons over 35 years will be considered.

FRENCH WAR BABIES

From the late Golden Gate International Exposition the de Young Museum has taken on a further collection of French war babies (paintings) to augment the 174 pictures which make up the collection brought to San Francisco direct from France several weeks ago. The combination makes an exhibition seldom, if ever, equalled in these parts and art lovers will miss plenty if they fail to take in this remarkable show. To say it's good is putting it mildly. Most of the pictures are stranded here on account of the war and there is no telling how long they are destined to remain in these parts. The collection includes a marvelous Madonna by Mino da Fiesole, a magnificent Rubens, two portraits by Frans Hals from the Hals Museum in Rotterdam, and Sir Joshua Reynolds' "Infant Samuel" from the National Gallery in London. (This last was sent to the Fair after the war began as a gesture of defiance to the German submarines. The ship that brought it over was sunk on the way back.) Another important war baby at the de Young is a very fine collection of Meissen porcelain.

DECEMBER EXHIBITIONS

December and early January exhibitions in San Francisco included water colors by George Post at the California Palace of the Legion of Honor, paintings by William Gerstle and lithographs by David Chun at the San Francisco Museum of Art, and paintings and prints by Pieter Irwin Brown at the Academy of Allied Arts.

PHELAN AWARDS IN ART

The trustees of the estate of James A. Phelan announce the opening of competition for the annual Phelan awards in art. This year they are limited to sculptors and water colorists. All native born Californians between the ages of 20 and 30 may compete for the fellowships, which carry a stipend of $900, and are tenable from July 15, 1941.

GRAPHIC SHOW

The annual exhibition of drawings and prints

of the San Francisco Art Association opens January 28 at the S. F. Museum of Art and will continue till February 18. A reception and private view, open to members of the Association, will be held the evening of the 28. Entries will be limited to three to an artist and will include the following media: drawing, etching, lithography, block printing, engraving and monotype.

Jury of Selection: Hamilton Wolf, Mallette Dean, Edward Hagedorn, Antonio Sotomayor and Ralph Stackpole. Alternates: Mildred Pommer, John Winkler, Claire Falkenstein.

Jury of Awards: Hamilton Wolf, Mallette Dean, Antonio Sotomayor. Alternates: Ralph Stackpole, Edward Hagedorn.

Artist Fund Prize: This prize is open only to artist-members of the San Francisco Art Association. For any medium: $50.00.

THE ALBERT M. BENDER COLLECTION

The Albert M. Bender Collection—the gifts of Mr. Bender to the San Francisco Museum of Art—has become an art collection of extreme importance. Some items contained in it have now grown well-known beyond San Francisco, as Rivera's **Flower Vendor**, Hofer's **Card Players**, Gaw's **African Marigolds.**

Nearly every work represents a generous assistance, encouragement and affection toward the artist who produced it. How much this encouragement has meant to many an artist and how much it has spurred his efforts and enriched his whole product, is inestimable. Tribute has often been paid to the collection from this standpoint in the past, but this emphasis fails to stress the importance of the collection as an art gift to the public.

There are 1090 works in the collection, the best part of which the public was permitted to view during the recent holidays. For the past six years, Mr. Bender has been continuously selecting, buying and giving these works to the Museum. The group must be regarded the greater for dealing mostly with the work of artists of this region or with those who have visited here.

There is scarcely a California artist of serious accomplishment whose work has not been recognized by Mr. Bender, including the comprehensive collection of 40 drawings by Charles Stafford Duncan.

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Upper left: Walt Disney (right) and Chief Engineer William E. Garity inspect the Johnson central control panel in the Camera Building. *Above:* Johnson valves on hot water heating mains in the Central Heating Plant.

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HOUSE AND GARDEN OF MR. AND MRS. ROBERT C. ELLIOTT, SAN FRANCISCO

Vincent G. Raney (center), Architect

UNUSUAL photographic evidence of architectural achievement and client satisfaction is this picture showing Vincent G. Raney, architect, and the new San Francisco residence of Mr. and Mrs. Robert C. Elliott. On a site with unobstructed view overlooking the Pacific, the house was designed to take full advantage of its dramatic location and the gardening hobby of its owner. Living and dining rooms partake of the view, the den has a picture window overlooking the dahlia garden, and even the bedrooms open onto a balcony facing south.

Stone exterior and tile roof establish the character of the house, which is recalled inside by a huge stone fireplace. The living quality which makes a house into a comfortable home is assured by all-gas equipment, including automatic heat from a forced air furnace, which may also be used for summer cooling, a modern range and automatic water heater.

Among Mr. Raney's previous accomplishments was the all-gas "Sunshine House" which attracted great interest at the Golden Gate International Exposition's model home display.

MARTINEZ OFFICE BUILDING

Bids have been taken by Dragon & Schmidts, architects, 2068 Allston Way, Berkeley, for a $30,000 office building to be built at Court and Main Streets, Martinez, for the Richmond-Martinez Abstract & Title Company. Construction will be of reinforced concrete and terra cotta with aluminum trim and linoleum floors.

REDWOOD CITY RECTORY

A sixteen-room rectory is being designed by Blanchard & Mayer, 369 Pine Street, San Francisco, for Rev. Cavanagh's Parish in Redwood City. The building will be two stories and basement with stucco exterior and tile roof. There will be a three-car garage.

OFFICE AND WAREHOUSE BUILDING

Working drawings are in progress in the office of Albert F. Roller, 1 Montgomery Street, San Francisco, for a one-story warehouse and two-story office building for the John A. Roebling Sons Company at Sixteenth and Carolina Streets, San Francisco. The owners will spend $150,000 on the improvements.

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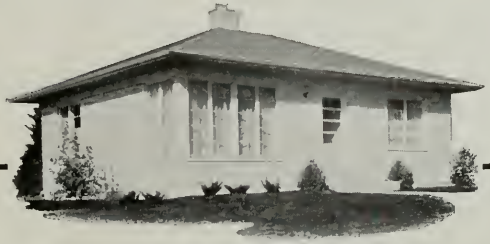

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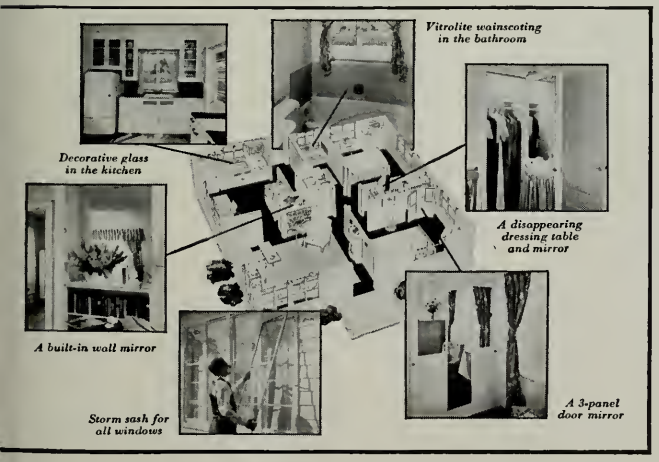
Vitrolite wainscoting in the bathroom
Decorative glass in the kitchen
A disappearing dressing table and mirror
A built-in wall mirror
Storm sash for all windows
A 3-panel door mirror

And Glass Sells Houses

HERE ARE GLASS DESIGNS FROM A TYPICAL "DESIGN FOR HAPPINESS" HOUSE

● The glass designs shown here are taken from one of the thousands of actual "Design for Happiness" Homes now being built all over the country. They illustrate the use of Glass in the modern small home. They are not only being *built*, but they are being *sold* even before they are completed.

In one bedroom is a three-way mirror, in another a built-in dressing table and mirror. A built-in mirror adds life and interest to the living room. The wainscoting in the bathroom is of colorful Vitrolite wall glass. In the kitchen the cabinet doors and the door to the utility room are glazed with a gay decorative glass called Louvrex. There's even a powder-puff mirror by the kitchen sink. The whole house is equipped in the colder areas with storm windows to reduce heating costs as much as 30%.

FOR FULL INFORMATION

For all the facts about this great nation-wide home-building movement, write Libbey·Owens·Ford Glass Company, Toledo, Ohio.

LIBBEY·OWENS·FORD GLASS COMPANY

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THE VALUE OF THE ARCHITECT

I Most people know that the business of designing and constructing a bridge needs an Engineer; in illness one needs a Doctor; in legal matters a Lawyer. A building with its infinite variety of modern facilities for comfort and health and its claim for beauty needs the Architect.

II The architect has expert knowledge of building materials and construction methods, and how best to plan for the installation of plumbing, heating, lighting and insulation.

III A building is a better investment if well planned and attractive in appearance. Only the trained Architect can make it so.

IV It needs no argument that the Owner's interests are best served by the Architect who has devoted years to special training for his work and therefore must be more intelligently qualified than the man with other interests, obligations and training.

V From start to finish of a building operation the Architect is the Owner's professional adviser and representative—in drawing contracts, complying with building codes and lien laws, certifying building charges, and seeing throughout that the Owner gets what he pays for.

VI The owner needs the supervision of an expert unbiased by commercial considerations to pass on the quality of the materials and workmanship going into his building.

VII Both owner and Builder depend on competitive bidding for fair prices. Fair competitive bidding depends on complete plans and specifications drawn by an Architect.

VIII Architectural services are a small fraction of the total cost of a building. A good Architect often saves the Owner a sum much larger than his fee.

COMMITTEE ON PUBLIC INFORMATION OF

THE AMERICAN INSTITUTE OF ARCHITECTS

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Rounded corners.
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1-AT
Ashlar Runner
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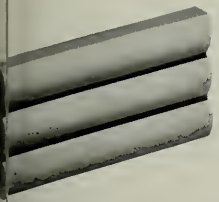

8-FB
Runner—Moulded band.
Maximum 24" long,
7⅞" high

- Architects and Builders are frequently in urgent need of ceramic facings for quick installations. This is especially true of remodelling and repair work. In such cases time will not usually permit the manufacture of special designs and colors.
- To meet such needs, and as a service to architecture and the trade, N. Clark & Sons gladly announce that they now carry five attractive colors in stock for quick delivery. The colors—selected after analyses of popular demand, as representing an effective range—are illustrated on these pages. To meet economical requirements also, consideration has been given to simple designs and minimum fittings.
- At present, stock limits have been set at 500 square feet per color for field ashlar plus additional quantities of sections 2RB and 8FB for any necessary trim features. There is no intention to limit the architect or builder to 500 square feet of any color, except to accommodate emergency needs for quick delivery out of available stocks. When time is not the deciding factor—and quite frequently it is not—the manufacturers can then produce special color schemes and without limitation of the quantity.
- The time required to supply a stock job in any of the five colors illustrated, will be approximately ten days after approval of drawings. It is planned that each job will be fitted completely at the factory, thus meeting the exact requirements of installation, similar to regular and larger work.
- The three stock sections shown can be cut to fit designs requiring specific conditions or miters at additional factory cost. Therefore, the most economical installations are to be had by using pieces of maximum size, as shown in these pages.
- SPECIFICATIONS. Reference should be made to Page 4 of the complete Unitile catalog entitled "Progress" for specifications covering installation of this material. Colors are subject to the usual ceramic variation.

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larktone No. 12105. Plain—tan buff. In order to approach new color schemes r all types of building this color has been chosen to start the field.

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larktone No. 12715. Triple Spot pulsichrome. The type of color that is meeting opular demand; chosen for its qualities to emphasize chrome trim, Neon ght, etc.

larktone No. 12711. Triple spot pulsichrome. This color is particularly daptable for field and in combination with Clarktone 12715; interchangeable r trim, etc.

arktone No. 12703. Triple spot, blue black base trim or field color. Particularly adaptable to bulkhead and base distribution; may be used with any above colors.

Above illlustration shows typical installation. Note the effect of vertical treatment of the piers and jambs; altogether practical as well as artistic. The variety of designs that may be developed by combining these three stock sections, is almost unlimited.

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Another notable installation in progress — Grass Valley Memorial Hospital, Walter C. Clifford, Architect.

ARCHITECTS: We will be pleased to work out details for Ferro-Porcelain construction in connection with most any type of building.

FERRO PORCELAIN ENAMEL AT ALBANY TRACK

The color scheme of the Golden Gate Turf Club's new racing plant at Albany, California, is blue and gold. To carry out these tones successfully the architect selected ferro porcelain enamel, a material both colorful and durable. The enamel sheets are securely fastened at the back with metal clips, a new method worked out by Frank Allen, who held the installation contract. All of the exterior walls are faced with these sheets, in addition to the pari mutuel booths, window sills, rails and panels for the boxes. The contract called for more than 125,000 square feet of this material which was fabricated in record time at the Ferro Enameling plant in Oakland.

The possibilities of ferro enamel for most any type of building would seem to be unlimited and the fact that any color desired may be selected should appeal to architects looking for color and modern treatment. The clip method of fastening the porcelain panels, used for the first time at the Albany track, has been found extremely satisfactory in that it not only makes for speed but very materially reduces installation cost. It has brought the price of ferro porcelain down to a favorable comparison with a good plaster job.

The enameling sheets are U. S. S. Vitrenamel, supplied by the Columbia Steel Company (West Coast subsidiary of United States Steel Corporation). Some idea of the size of the installation may be had from the fact that the total weight of these sheets is more than 125 tons.

EMERYVILLE FACTORY

Will G. Corlett, Bank of America Building, Oakland, has completed drawings for a one-story reinforced concrete and structural steel factory building, 100 x 300 feet, at Emeryville for the General Cable Corporation. Other work in Mr. Corlett's office includes a group of buildings at the Risdon plant, San Francisco, for the Bethlehem Steel Company.

MARYSVILLE LIBRARY

Yuba Junior College District will build a new library from plans by Charles F. Dean of Sacramento. The one-story stucco building will cost $25,000. The same architect is preparing preliminary drawings for a frame music building at the Marysville Union High School.

CHRISTIAN SCIENCE CHURCH

Plans have been completed by Henry H. Gutterson of San Francisco and a contract has been awarded for $95,000 to Anderson & Ringrose for the construction of the Ninth Church of Christ Scientist at Junipero Serra Boulevard and Darien Way, San Francisco.

FOUR GRAMMAR SCHOOL BUILDINGS

Plans have been completed in the office of Masten & Hurd, 442 Post Street, San Francisco, for a group of four grammar school buildings in Eureka.

They chose Porcelain Enamel

OR THE GOLDEN GATE TURF CLUB

THE beautiful new $2,000,000 racing plant of the Golden Gate Turf Club at Albany, California, is probably the most perfect example of modern functional racetrack architecture in the world. Its three-tiered grandstand not only seats more people than any race course in the country, but is designed so that every spectator is centered as directly as possible upon the finish line. The grounds are graded to afford a perfect view of every inch of the race.

The major contribution to its beauty is the blue and gold porcelain enameled steel used for the exterior covering of the grandstand, for the letting windows and for the grandstand boxes.

Porcelain enamel on U·S·S VITRENAMEL was chosen primarily for its permanence and beauty, and next for its advantage of eliminating upkeep costs such as painting. One hundred and twenty-five tons of enameled sheets were used. (The Porcelain Enamel Institute of Chicago says, "It is probably the largest job which has ever been constructed with porcelain enamel panels.")

The panels were applied to wooden studs by means of small clips welded to their backs and sealed together with mastic. No backing was used on the panels, most of which are of 50" by 80" dimension, and 18 gauge in thickness.

Mr. Maury I. Diggs was designer and builder. The U·S·S VITRENAMEL sheets were fabricated and enameled by Ferro Enameling Company of Oakland, and installed by Frank Allen Ferro Porcelain Construction of San Francisco. Mr. Jack Casson, general contractor.

PORCELAIN ENAMEL ON USS Vitrenamel UNITED STATES STEEL CORPORATION SUBSIDIARIES

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When they built the beautiful Santa Anita Racing Plant in Southern California, buildings and grounds were completely

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FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEET'S

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HOME OF MR. AND MRS. ROBERT C. ELLIOTT, SAN FRANCISCO. Architect Raney (center) visits his clients at their all-gas equipped home which he recently designed. The owners and daughter, Elaine, proudly display their prize garden. ☆ Liberal use of warm-toned stone and tile features this interesting adaptation of Moderne design to the exteriors.

ENT G. RANEY, A. I. A.

ll-known San Francisco architect, a advocate of gas appliances, is adept at homes that express the ideas and in- ity of the owners with unusual charm.

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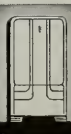

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ALTERATIONS AS USUAL DURING BUILDING

?

Architects have become resigned to owners' demands for frequent changes in plans after building has started. They know last-minute changes are to be expected, and budgets must have a little flexibility to take care of them.

However, the architect alert to changing trends, has found that he can avoid annoying changes and additions to the electrical service by giving the wiring plans the necessary attention before building starts.

Electrical service has become so increasingly important to owners during recent years that owners are more aware than ever that wiring should be done right at the time of building.

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JOAN BENNETT RESIDENCE

WE ARE HAPPY TO HAVE WORKED WITH ARCHITECT WALLACE NEFF ON THE JOAN BENNETT RESIDENCE, FURTHER ILLUSTRATED ON PAGES 24, 25 AND 26, AND ON THE KING VIDOR AND GEORGE MILLER RESIDENCES ILLUSTRATED ON PAGES 28 TO 32.

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COMPETITION

ILLUMINATING ENGINEERING SOCIETY PRIZE
Program Issued January 4, 1941
Date of Submission February 17, 1941
Judgment, March 8, 1941

This prize is for a problem on illumination as related to architectural design and is awarded on the Class A III Problem "A Club Swimming Pool."
Students in any university may enter this competition with certain restrictions:

1. If they are in a school taking regular Beaux-Arts Problems, they are already classified as Class C, B or A students, Class A being the highest grade, and only Class A students are eligible to take this problem.
2. If they are in a school not regularly taking our problems, they are free to enter this competition by registering for a single problem and paying the $2.50 registration fee to the Beaux-Arts Institute of Design, before the problem is issued. No programs will be sent unless the fees have been received in advance. Since these students are competing with the highest grade in other schools it would be advisable to have the upper classmen only enter the competition. The programs will be sent to the Supervisor of the Architectural Department, who will distribute them to the students, registered.

The winner is awarded a prize of $300, the student placed second $200, and the student placed third $100.
Should the drawings merit it, the Jury may further award five prizes of $50 each.
An additional amount is available for prizes to ten students in the form of payment of registration fees for the following year, at the Beaux-Arts Institute.

The unique King Vidor residence, designed by Architect Wallace Neff and described elsewhere in this issue, is one of Southern California's most distinctive houses. Planned for enjoyment, comfort and livability, its specifications include PAYNEHEAT. ✦ Throughout the nation in homes—large and small—PAYNE gas-fired heating and winter air conditioning equipment provides dependable, comfortable, vented warmth . . . year after year. ✦ Your client will respect your good judgment when you specify a PAYNE Furnace.

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If you are planning that kind of kitchen, Crane can aid you. Crane has made a special study of Family Planned Kitchens—has found new ways to make kitchens more livable, yet thoroughly scientific in their equipment and arrangement.

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WEST LOGGIA, DOHENY MEMORIAL LIBRARY, CAMARILLO, CALIFORNIA

WALLACE NEFF, ARCHITECT

Padilla Studios

KETCH OF PROPOSED RANCH HOUSE FOR DARRYL ZANUCK, LOS ANGELES, CALIFORNIA
Vallace Neff, Architect

WALLACE NEFF, ARCHITECT
SOME OF HIS RECENT WORK

by Mark Daniels

WALLACE NEFF, A.I.A.

AT a large table of friends in Los Angeles, the subject of the many houses that Wallace Neff has done in Southern California became the major topic. One man held forth at some length and I finally said, "You seem to like the work of Mr. Neff very much indeed." "Well," he replied, "who doesn't?" During the years that followed I learned that this man's answer was a 100 per cent.

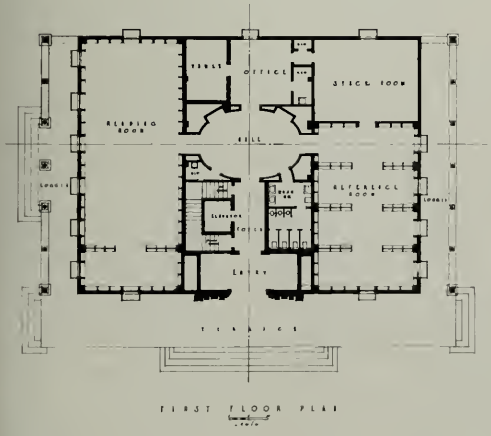
Neff has a style that is very definitely all his own. If you would ask me whether he likes Modern or not, I would say that he likes it so long as it is traditional. And yet in his most emphatically traditional architecture he always seems to be able to introduce something that is Modern without committing an anachronism and certainly without its being Moderne. No matter whether you want to or not, you cannot help liking both Neff and his work. If you are inclined to doubt this, visit with him some of his clients in houses which he has designed. You will find that they all are enthusiastic and that most of them, particularly the women, pet him as if he were a sort of human Persian cat. The movie colony, in particular, have a very definite liking for Mr. Neff and his work as may be noted from the accompanying illustrations. In most every instance the houses are for stars of the silver screen.

DETAIL, DOHENY MEMORIAL LIBRARY, CAMARILLO, CALIFORNIA

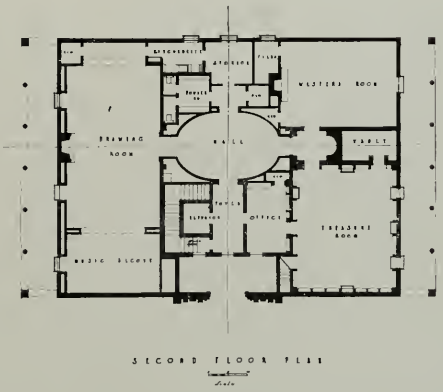
The main entrance is of stone. The design is derived from the Cathedral in Mexico City. Stone work is grey white; plaster is pink; grille work is blue green.

GENERAL VIEW OF DOHENY MEMORIAL LIBRARY AS SEEN FROM ST. JOHN'S MAJOR SEMINARY

Over the entrance is a statue of Our Lady of the Miraculous



FIRST FLOOR PLAN



SECOND FLOOR PLAN

PLANS

REFERENCE ROOM

TREASURE ROOM

DRAWING ROOM

There is one criticism I have to mak Wallace—he is too darned good looking. companion you would not ask for better it are going to a stag dinner at the Club, b you are going to a ladies' tea, I advise yo take a book along with you. He is a connoi of good food but it does not seem to a his vest buttons, probably due to his ent asm for skiing which, along with designing houses and working in his photographic room, are his three major hobbies.

That intangible quality which Wallace seems to inject in his work is unquestionabl product of his extensive training. He prep for his college work in the Selig Scho Vevey, Switzerland, then spent five years st ing architecture in Italy, France, England Germany, two of which years were in o work in Munich, Bavaria. After this perio intensive study and training in Europe, he ished with two years at Massachusetts Inst of Technology in Boston. Of course, this ha seems enough training but, nevertheless, he received five honor awards for his work the Southern California Chapter, A. I. A.

Wallace Neff has done so many wo works it is difficult to select any particular for detailed discussion, nor does that see be necessary in a magazine profusely illustr with his accomplishments. However, one c latest, the E. L. Doheny Memorial Librar Camarillo, California, has a very strong ap The good balance of rich ornament with long plain surfaces and the beautiful ar have seldom been equalled.

The entire building is air-conditioned to tect the rare books and paintings from at pheric extremes and also to afford comfort working conditions for the students. The b are housed in recessed shelves, protecte bronzed grills. As may be seen in the ph graph on this page a balcony fills one en the treasure room with shelves running to ceiling.

That Mr. Neff's client was well pleased his design of the Camarillo Library may judged from the fact that he has been com sioned to do another memorial building for Doheny in Washington, D. C.

A.I.A. Honor Award

Padilla Studios

RESIDENCE OF MME. GALLI CURCI, WESTWOOD, CALIFORNIA

Exterior walls are white plaster with dark grey blue shutters and black tile roof. The living room chimney is carried around to the two story part over the library and hall, before it comes out through the roof.

LIVING ROOM FIREPLACE

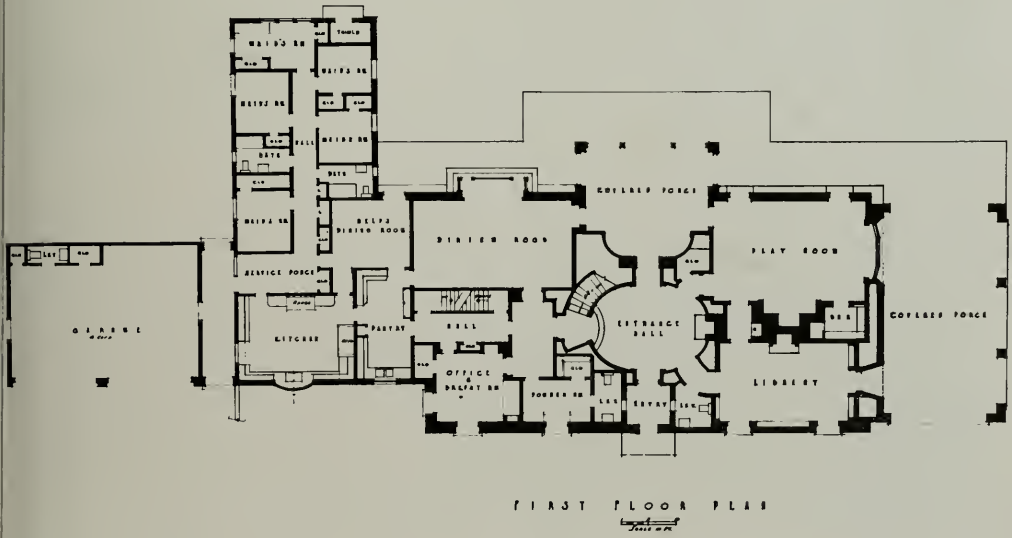
PLAN

Maynard Parker

ENTRANCE HALL FIREPLACE, RESIDENCE OF JOAN BENNETT, HOLMBY HILLS, CALIFORNIA
Wallace Neff, Architect

FRONT VIEW, RESIDENCE OF JOAN BENNETT, HOLMBY HILLS, CALIFORNIA

The brick walls are painted white, blue shutters, dark grey shingle roof



PLAN

DINING ROOM, RESIDENCE OF JOAN BENNETT, HOLMBY HILLS

Maynard Parker

POWDER ROOM, JOAN BENNETT RESIDENCE

The Bennett residence is French Provincial . . . draperies, carpets and furniture designed and executed by Hogel Wray Dovey.

Dining room walls have painted wall paper in green, grey and red . . . embossed green and grey rug . . . French berret curtains with red, gold and green stripes.

Walls have green and white striped paper with a provincial rose cornice.

LIBRARY, RESIDENCE OF LOUIS B. MAYER, SANTA MONICA

Geo. D. Haight

The color scheme of the Mayer library is red and white with an occasional touch of blue . . . a large bay window affords sunshine and matchless view . . . an attractive mirrored bar opens off this room.

Characteristic of a well designed desert house is the extremely plain fireplace detail in the living room of the A. K. Bourne house at Palm Springs, California, shown at the right . . . walls throughout are white, rugs yellow.

Padilla Studios

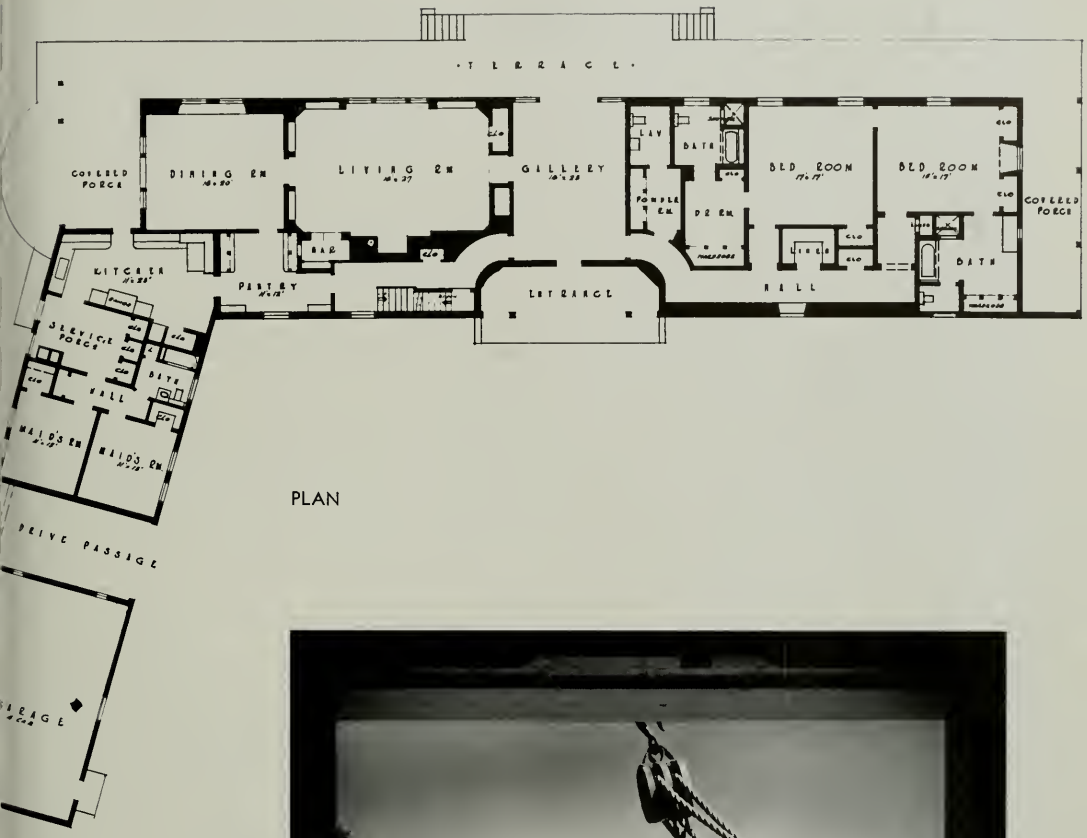
THE KING VIDOR RESIDENCE, BEVERLY HILLS

ENTRANCE DETAIL

The Vidor residence is situated on top of a knoll overlooking Beverly Hills and the distant Pacific Ocean . . . a view of unsurpassing grandeur greets the visitor as he reaches the front entrance . . . both the exterior and interior are extremely simple in design which smacks of an early American style . . . the walls are white . . . within there is a very colorful peasant-like feeling, accentuated by English hand blocked linen and course textured cotton rugs.

SERVICE WING AS SEEN FROM ENTRANCE

Magnolia trees flank each side of the entrance while gardenias and other white flowers carry the white of the house into the garden.



PLAN

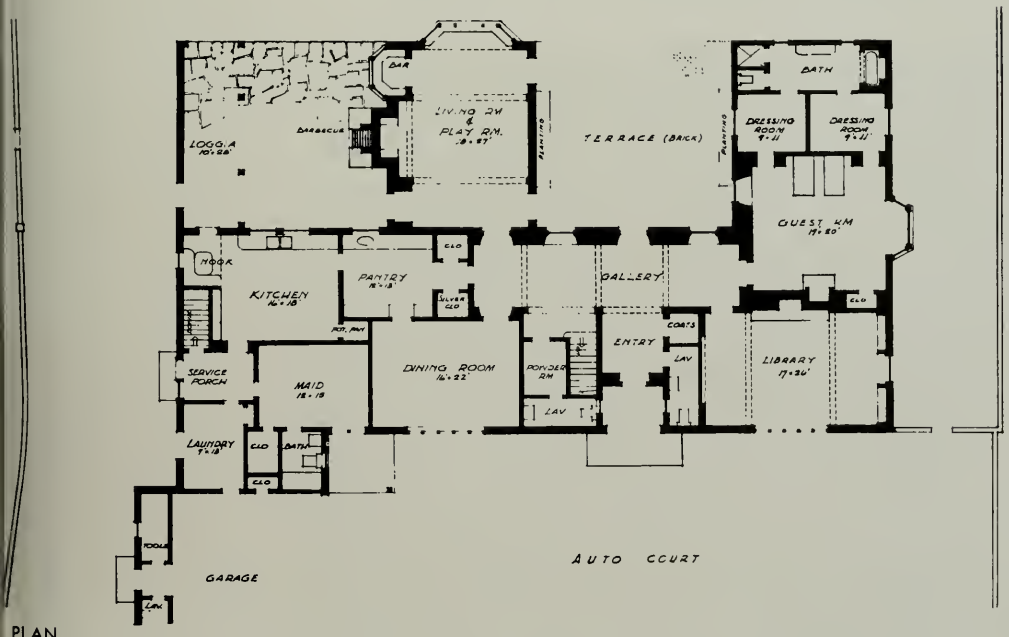
Maynard Parker

view of the King Vidor
. . built of redwood
ainted white with green
green stripe under cor-
dar shingle roof of grey
lor.

ENTRANCE DETAIL, RESIDENCE OF GEORGE MILLER, BEL-AIR, CALIFORNIA
Wallace Neff, Architect

Padilla Stud

GENERAL VIEW OF GEORGE MILLER RESIDENCE, BEL-AIR, CALIFORNIA
Exterior walls are white painted brick with dark grey woodwork and dark grey cedar shingles



PLAN

THE GEORGE MILLER RESIDENCE, BEL-AIR, CALIFORNIA

A pure white house as seen through oak branches . . . the flower box over the main entrance spills deep red geraniums . . . vines on the house are red Bougainvillaea.

The barbecue patio is laid out for utility and livability . . . the kitchen and bar both open onto this terrace, floor of which is dark green flagstone.

The Miller dining room is paneled with walnut while the drapes are a soft green cotton damask . . . Jacobean style furniture.

Dark woodwork against snow white plaster gives the entrance gallery a smart appearance . . . doors and beams are all walnut with wide oak plank floor.

SKETCH OF PROPOSED ALTERATIONS TO RESIDENCE OF CHARLES CHAPLIN AND PAULETTE GODDARD
Wallace Neff, Architect

RESIDENCE OF ROBERT GARNER, SAN MARINO, CALIFORNIA
Wallace Neff, Architect

ETAIL OF FRONT, SHIRLEY BURDEN RESIDENCE, BEVERLY HILLS
Vallace Neff, Architect

Padilla Studios

AN UNUSUAL FIREPLACE TREATMENT

A COLORFUL INTERIOR, RESIDENCE OF SHIRLEY BURDEN, BEVERLY HILLS, CALIFORNIA

Wallace Neff, Architect

DINING ROOM FROM LIVING ROOM, RESIDENCE OF WILLIAM GOETZ, SANTA MONICA, CALIFORNIA

Geo. D. Haight

Wallace Neff, Architect

AIRPLANE VIEW OF ALBANY RACING PLANT, ALBANY, CALIFORNIA

The promoters have spent $2,000,000 on the project. Heavy rains early in January made the track so dangerous that the opening day was three times postponed at heavy financial loss to the owners. The racing strip, shown clearly in the photograph, became a veritable quagmire. Contractors were employed to remove the sticky top dressing and resurface with Antioch sand.

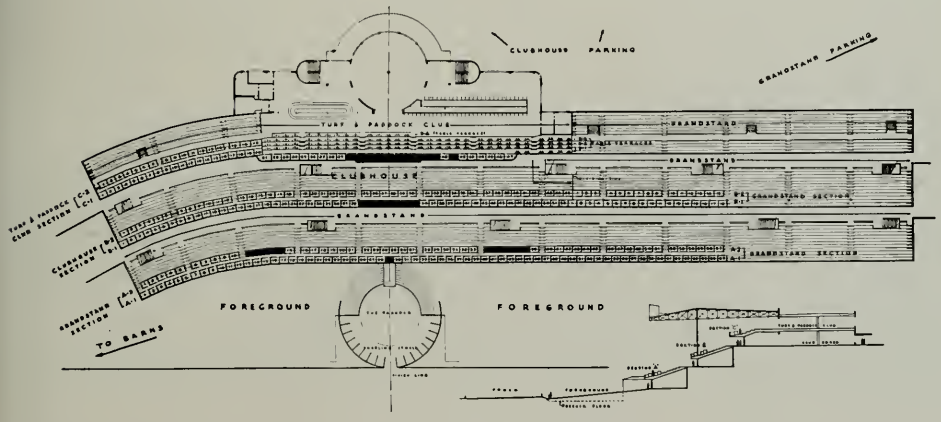
GENERAL VIEW OF THE HUGE GRANDSTAND, ALBANY, CALIFORNIA

The structure is 650 feet long, three tiered

FUNCTIONAL DESIGN
THE ALBANY RACETRACK

By Fred W. Jones

OUR vocabulary of superlatives is too limited to adequately describe the beauty of Albany's swank new racing plant, scheduled for its inaugural opening late in December but which, due to bad weather, did not actually get under way until mid-January. Somebody erred in prescribing the wrong kind of surfacing material for the track which became a veritable quagmire, so muddy and sticky no horse could run on it with speed or safety. Otherwise the racing plant compares favorably with any other similar enterprise in the country, if indeed it is not the peer of them all, Santa Anita included. Just as the matchless Bay Bridge impresses one with its beauty and strength, so this racing plant affects one because of its bigness and splendor. Architecturally and structurally it reflects careful plan-



PLOT PLAN, SHOWING LOCATION OF BUILDINGS AND SEATING ARRANGEMENT IN GRANDSTAND

VIEW FROM BOXES SHOWING PADDOCK (CENTER), PORTION OF RACING STRIP AND GENERAL LANDSCAPING OF OVAL

REAR OF GRAND STAND AND APPROACH TO CLUB HOUSE
Color scheme is blue and gold

CIRCULAR LOUNGE IN CLUB HOUSE

Approximately $75,000 is said to have been spent for interior decorations

ning and good design. Built upon a hill of earth and rock that jets out into the Bay, the grandstand occupies a natural elevation from which one obtains a sweeping view of the track, the beautifully landscaped oval and in the background, the colorful Berkeley hills. Contour of the land makes it possible to reach the higher tiers of the grandstand without climbing stairs. Parking space for club house patrons is at the extreme rear of the grandstand entrance which is reached from the same level as the parking strip.

If we accept the architect's word, the plant possesses many features that are to be found nowhere else on the great tracks of America or Europe. No other horse-racing plant can boast of a paddock built directly in front of the grand stand, or a racing strip with grandstand, club house, turf and paddock centered on the finish line, or a three-tiered one-unit stand that includes in it about everything but the track itself and stables.

Over 850 tons of structural steel, 150 tons of reinforcing steel, 125,000 square feet of blue and gold porcelain-enamel iron and 100,000 square feet of roofing material were used in constructing the mammoth structure. Eight hundred fifty feet long, it will seat just under 15,000 persons. Standing room space will take care of 65,000 additional fans, giving a total capacity of 90,000, compared to 80,000 at Santa Anita, 60,000 at Hollywood and 30,000 at Bay Meadows.

The paddock or saddling ring, placed directly in front of the grandstand and visible from one end of the stand to the other, is unique in horse racing annals, has been the subject of much favorable comment. Each stall is equipped with a shell-like covering (like parasols), which may be adjusted to meet weather conditions a la convertible automobile. A section of this circular paddock is reserved for owners and trainers who have horses in a race. Horses and jockeys come from under the stand into the paddock, where the G.G.'s are saddled and then driven directly onto the track, the entire procedure in full view of racing fans.

The stable area south of the grand stand

has accommodations for 1700 horses. The barns are built of knotty pine, weather tight and doubly reinforced. They not only furnish complete protection for the horses, but afford comfortable living conditions for the stablemen and exercise boys.

There are two large dining rooms, five bars, and numerous coffee counters and small refreshment booths. The clubhouse dining room will seat 400 and adjoins a kitchen 115 feet long. Table terraces in the Turf and Paddock Club will seat 500. The coffee shop has a counter that accommodates 100 with a top made of new fireproof material. In the clubhouse lounge is a circular bar made of white Philippine mahogany and measuring 100 feet around and 35 feet across.

Fluorescent lights are used to illuminate the beautiful club rooms and circular lounge, decorated and furnished at a cost of $75,000.

The parking space is north and back of the grand stand. Some 13,000 automobiles and 100 busses may be cared for.

The plans for the landscaping of the new track and grounds were prepared by Mark Daniels, A. I. A., who was the landscape architect for the California Commission, the Federal Government and the consulting landscape architect for the Exposition Company at the Golden Gate International Exposition.

Perhaps some statistics may throw a little light on the magnitude of the job of landscaping a race track. The first season's planting which, of course, was the initial and major work, called for the following list: 1,500 trees varying in height from 15′ to 40′; 10,000 fully developed shrubs; 800,000 flowering plants. The varieties covered the widest range possible in this particular locality.

Harping again upon the bad weather which has caused the track promoters endless grief, Mr. Daniels says that had he known there was to be a period of fifteen days steady rain, he might have confined the varieties used to seaweed.

The Albany track promoters have matched their faith in the future of horse racing in California with a $2,000,000 investment and time alone will determine success or failure of the venture.

FLUORESCENT LIGHTING IN THE HOME

by Myrtle Fahsbender and Richard G. Slauer

The widespread acceptance of fluorescent lighting by industry and commerce has brought with it questions as to the possible application of this light source in the home. The authors present in this paper practical data as a result of study of fluorescent lamp installations in private families of varying incomes.

WIDESPREAD acceptance of the fluorescent lamp by industry and commerce, plus its dramatization by two great Fairs (S. F. and N. Y.) naturally has given birth to a constantly recurring question, "Can it be used in the home?" It seems important, therefore, to analyze the broader aspects of home lighting to determine (first) where fluorescent lamps might be used satisfactorily, and (second) if used, would they represent any basic change in home lighting practice.

Any new light source discussed as a possible addition to home-lighting practice seems to suggest only two comprehensive approaches for such analysis. The first approach is that of merely considering the lamp as a replacement for light sources already in use. The second approach is broader—the determination of the ability of the lamp to create a new technique of light application. Either approach requires a thorough knowledge of the new source, with particular reference to how it differs from sources in current usage.

A study of the fluorescent lamp as a replacement or an adjunct to the incandescent lamp indicates an analysis based on the following points:

1. Are the spectral qualities of the white and daylight lamps satisfactory for home lighting?
2. Does the fluorescent lamp blend with natural daylight and with the incandescent lamp?
3. Is lamp coolness important in home lighting practice?
4. In what way does the shape and size of the fluorescent lamp advance or limit its application?
5. Is the stroboscopic flicker a barrier to the use of the lamp?
6. How important is the accessibility of almost unlimited quantities of colored light for home decoration?

SPECTRAL QUALITY

In general, the spectra of the fluorescent white and daylight lamps approximate their respective names. Those who have used the lamps will agree to their suitability in broad fields for these qualities.

However, for many lighting applications, color quality cannot be assessed along broad lines but must be subjected to a very critical analysis. To the authors, the following specific home activities must be included in such a category: (1) the handling and serving of food (dining room and kitchen), (2) the decoration of the home (with special reference to wall surfaces, drapery etc.), (3) the usual personal attentions (exemplified by vanity tables, bathroom mirrors, and (4) special duties (laundry, sewing room).

Food: Although the design of the fluorescent lamp is such that most of the radiation of the arc stream is in the form of ultraviolet, an important two per cent is in the visible mercury lines which are not appreciably absorbed by the phosphor coating. This in effect means that added to the more or less continuous spectrum created by the phosphor are peaks or distortions, noticeably in the blue-green and yellow-green regions. At the same time the phosphors fail to provide sufficient red of which the incandescent lamp has an overabundance. Therefore, some foods will differ in color when for critical comparison they are placed first under incandescent and then fluorescent. This is also true of natural daylight and incandescent but we have by habit accepted these changes. To many people, the

A paper presented before the Thirty-fourth Annual Convention of the Illuminating Engineering Society, Spring Lake, New Jersey, September 9-12, 1940. Authors: Home Lighting Specialist and District Engineer, Westinghouse Electric & Mfg. Company, Lamp Division, Bloomfield, New Jersey, and New York City, respectively.

Fig. 1—Dining room with fluorescent lamp in window bay to supplment fluorescent fixture.

Fig. 2—An artistic design of fluorescent fixture for a formal dining room.

Fig. 3—Portables and a fluorescent lamp window valance combine to produce an attractively lighted interior.

appearance of foods is almost as importan as the taste, and the color distortions that ar part of normal fluorescent lamps are objec tionable.

Yellow foods are the chief sufferers wit fluorescent lighting since the yellow is accen tuated and they become greenish in cast, an yellow-green ranks low in the color preferenc of the average person. Butter, lemons, corn fricassee chicken, squash, might be cited. Red are much less affected than popularly sup posed, since it is only the very deep reds (suc as rare meats) that are noticeably altered Beets, radishes, red berries, catchup, etc., ar seldom picked out by strangers for distorte appearance. Certain browns and olives (i. e. olive colors) are affected—the most important being coffee, especially with milk or cream dilu tion.

Experience with six months of service in the dining room, Fig. 1, permits the following broad generalities:

1. Within a few weeks the average adult will overlook the relatively minor color differences associated with fluorescent lighting.
2. Children are almost indifferent to such factors.
3. The average menu seldom contains more than one or two items where any real distortion is noticeable.
4. Incandescent lamps produce certain distortions of color which have gradually become commonplace and therefore acceptable. It is logical to assume colors as they appear under fluorescent lamps will, in time, also be acceptable.

Three "whites" are commercially available—the Daylight, the 3500 K White (present standard) and the 2800 K White, which was the original standard and is now popularly known as the "Warm White." In the dining room, Fig. 1, very little difference was noticed in the appearance of foods with any one of these lamps as compared with another, although the daylight was slightly inferior. Far more important was the effect on the room, the table, and its surroundings. The daylight lamp was distinctly cold and bluish in appearance; it had no qualities of mellowness so desirable to the average diner.

The fixture in Fig. 1 is pewter with side and bottom pieces of glass using three 20-watt,

warm-white fluorescent lamps producing an average of 13 ft-c on the table top. The 40-watt, warm-white lamp illuminating the bay-window recess and producing about 12 ft-c on the window seat, is merely for decoration and does not contribute to the lighting on the table top. It does, however, add much to the cheerfulness of the room and is balanced on the opposite side of the room by fluorescent light over two corner china cabinets. At those times when candles provide the only light, illumination from these other sources does much toward making candle lighting more satisfactory. In this dining room, warm-white lamps were chosen because the glass itself had no trace of color. Since this color is not readily available, and may become obsolete, the importance of a slight tinting to the glass for utilizing the 3500 K White should be appreciated.

The attractive polished silver and crystal fixture in Fig 2 is oval in shape, approximately 27 inches by 16 inches and 18 inches overall. An average of 15 ft-c on the table top was produced by one 20-watt T-12 and two 15-watt T-8 white fluorescent lamps. The owner of this home preferred the white lamps to the warm white.

To summarize the above, it is recommended that care be given in the application of fluorescent lamps in the dining room. However, only a slight change in phosphors, or the introduction of a new color which avoided the distortions mentioned, would be needed to make it acceptable under all circumstances.

It has been frequently observed in industrial and commercial applications that high levels of fluorescent lighting tend to suppress apparent color changes. Naturally, these considerations apply to its use in the dining room, but it is doubtful whether the level actually necessary would be acceptable. No critical seeing problems exist in the dining room when used only for dining and since a feeling of repose and restfulness is desired 15 ft-c is acceptable. Further investigation may supply additional data for conclusions, but the studies of the authors indicate that high-level lighting merely to eliminate color differences is not practical in the dining room.

However, where the dining room is used for studying or similar eye tasks, a 15-footcandle lighting level is not always adequate. In most dining rooms, additional light is provided by placing a portable lamp on the table. This inconvenient necessity could be overcome with fixtures designed to accommodate enough lamps of correct size to produce a desired lighting result. The fluorescent lamp, because of its shape, coolness and efficiency, offers the designer the possibility of designing a dining room fixture that will produce 20 to 30 footcandles of illumination for study purpose. For example, the addition of a second 20-watt T-12 white fluorescent lamp in the fixture shown in Fig. 2 would increase the lighting level to 21 footcandles.

Kitchens present a different aspect, assuming a distinction between the preparation and consumption of foods. All activities in the kitchen are under the control or inspection of one or two persons, and the spectral quality of the light is not critical in the same sense as the immediate association of sight and taste while consuming food. Other characteristics of the fluorescent lamp seem more important, and will be discussed later.

Decoration: Uncertainty as to color changes of interior decoration under fluorescent lighting has been a retarding factor in its application. The presence of the green and yellow mercury lines in the spectrum of fluorescent lamps may over-emphasize these colors in wall finishes, drapery, rugs and upholstery and therefore their appearance may be objectionable.

As a study of these opinions the authors submit in detail the color schemes, the lighting and the results of three living rooms as shown in Figs. 3, 5 and 6.

In Fig. 3 the apartment living room is 13 ft. by 20 ft. with a 9-ft. celing. The color scheme is as follows: walls—light pink; ceiling—cream; rug—brown; drapery—brown background with cream and tan leaves and dusty pink flowers; chair—(left) brown and gold; and chair (right) —green.

In this living room three 30-watt T-8 fluorescent lamps are placed behind the 9-ft. win-

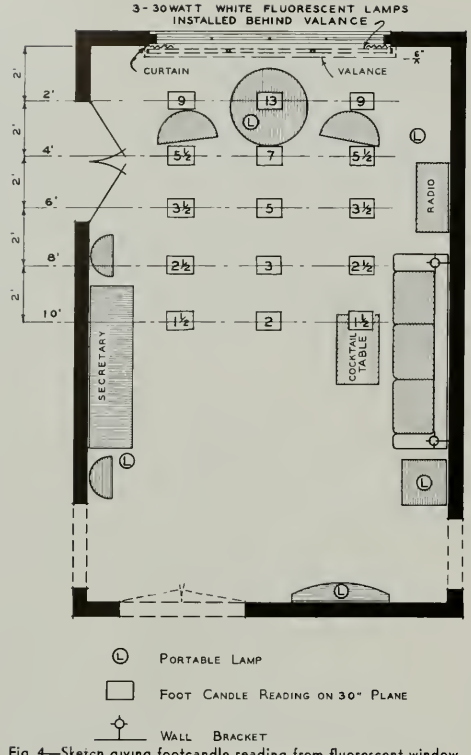


Fig. 4—Sketch giving footcandle reading from fluorescent window valance shown in Fig. 3.

Fig. 5—Fluorescent lamps are incorporated in the modern design of the ceiling fixture and bridge lamp.

dow valance, and one 15-watt T-8 lamp is placed on top of a secretary (not shown in photograph). The following are some reactions to the use of daylight, white and warm-white lamps:

The daylight lamps changed the pink walls to a wisteria, an orchid-pink. This change was not objectionable although the walls became a subdued orchid-pink when a spirited pink was desired. On the other hand, the warm white lamps were objectionable as the walls became a reddish-pink that might be termed "peppermint-pink." Under the warm white the ceiling became "pinkish" and the pink flowers in the drapery were intensified and the brown background became a reddish mahogany brown. The white fluorescent lamps were exceedingly pleasing and there was no objectionable color change. The color change in this room from natural daylight to fluorescent was less noticeable than from daylight to incandescent.

The window valance was so constructed that it was possible to adjust it. From a decorative point of view the valance should not be more than six inches out from the window frame. Measurements indicated that the wall directly over the valance had the highest brightness, but this was only of the low order of one-quarter candle per square inch.

The living room in Fig 5 is 14 ft. by 17 ft. with an 8-ft. 6-in. ceiling. The color scheme is: walls—light gray; ceiling—white; woodwork—blue-gray; rug—gray; drapery—dubonnet; chairs—chartreuse; and davenport—Alice blue.

The ceiling fixture of polished silver is eighteen inches square, six inches deep and equipped with five 15-watt T-12 fluorescent lamps. The daylight, warm white and white lamps were alternately used in this fixture. The daylight, to the authors, was definitely objectionable as it produced an exceedingly cold, gloomy appearance; with the warm white lamps, even though they produced a pleasing flesh tint to the glass of the fixture, the gray walls and blue-gray woodwork became an unattractive blue-green. The white lamps were least objectionable, but, nevertheless, when used without portable lamps were subject to some criticism.

Fig. 6—A CONTINUOUS COVE OF DAYLIGHT FLUORESCENT LAMPS ILLUMINATE THIS LIBRARY AND SUN-ROOM

Fig. 6 shows a 124-ft. continuous cove installation in a large room, one-half designed as a library (A), and the other half as a sun room (B). The two rooms are separated by a flat arch, and drapery may be pulled for complete separation. The illumination level, largely from 36-inch and 48-inch daylight lamps, was over 35 ft-c. The ceiling height is 9 ft. 8 in. with the room sizes as follows: A—Library: 17 ft. by 14 ft.; B—Sun room: 14 ft. by 8 ft.; C—Bay window: 10 ft. by 7 ft. 6 in.; walls—gray-green; ceiling—white; rug—green; and drapery—with orange and yellow designs on a cream background—complete the color scheme in this sun-room—library.

The authors wish to call attention to the cool colors used in the interior plus the use of daylight lamps. From their experience such a color scheme with daylight lamps produces a very bluish-green cool interior. It has always been accepted that the work of an interior designer was one in which the personal element of likes and dislikes was very important. This personal factor also enters residential lighting. We believe the fluorescent lamp broadens the ability of the interior designer and lighting specialist to cope with all phases of this personal element.

Color, now so readily obtained from fluorescent lamps, does not seem to be an important advantage. Naturally, Christmas, party, and other decorative applications become easier, but due to the relatively high initial cost of fluorescent lamps and operating accessories, they will probably be used sparingly.

Naturally the availability of color may stimulate some thinking on this matter by interior designers, and a new technique of application to normal interior lighting requirements may evolve. This would really change home lighting practice if it became widespread in scope, but

the immediate hope of such developments seems scant.

GENERAL OBSERVATIONS

Radio Interference: As a general thing some degree of radio interference accompanies the use of all arc lamps. The exact degree varies and while in some cases it could not be called excessive, it still represents a handicap to a public quite critical in its radio reception. Radio interference could not be completely eliminated in the radio used on the work surface under cabinets, probably due entirely to direct bulb radiation.

On the other hand, in the radio connected to the same circuit as the fluorescent window valance shown in Fig. 3 there was no interference even though no special precautions were taken. This bears out the statement that in many cases radio interference is negligible when the radio set is five or more feet from the fluorescent lamps.

Numerous tests are being conducted to completely eliminate such interference, and it seems entirely probable that the near future will see a partial or perhaps a total solution to this matter.

Slow Starting: The fluorescent lamp is not instantaneous in the same sense as the incandescent lamp, since under most conditions at least one second is required—in many cases, at least three seconds. A walking speed of four feet per second is commonplace in household movements, and therefore with three-way control on doorways ten feet apart, it is entirely possible to flip a switch, cross a room, and be out before the light comes on.

It is doubtful whether this is as much of a disadvantage as it seems, although it is something that must be considered. A basic factor in adequate wiring is the ability to control lights upon entering a room. Human nature cannot be changed readily, and impatience is characteristic. Therefore either switch control is neglected, or (for a stranger) confusion exists. Like the problems of spectral quality, it is very easy to become accustomed to such idiosyncrasies when actually living under such conditions.

Hum: Some "noise" is inherent in any transformer or electrical device as used with the fluorescent lamp, but this should be far less than the usual electric clock or refrigerator. With two-lamp controls, the amount is so slight that contact with the ear is almost necessary. Naturally, however, if improperly installed so that it is amplified (as for example, in a cheap, loosely built fixture) the noise may become annoying.

The whole matter is largely one of manufacturing technique and the problem of hum is fast disappearing.

Cost of Equipment: In previous discussions, no attempt has been made to weigh the value of fluorescent lamps except from the lighting standpoint. Naturally the cost of equipment must be considered. Fluorescent equipment, as compared with equal grades of incandescent equipment, will cost several times as much. The length of the lamp, the use of two lamp-holders and the requirements of auxiliary equipment probably insure the continuance of this ratio.

But initial cost cannot be considered the sole criterion. Incandescent fixtures for living room lighting are available for 69 cents, for five dollars, for twenty-five. Each increase in price is justified not only by the quality of illumination produced but by factors of style, decoration, safety, durability, etc. Fluorescent lighting must be analyzed on the same basis, with the added complex factor of weighting the importance of color quality, coolness, shape, and other characteristics which have been discussed and which may not be conveniently available from other light sources. Individuality and distinctiveness may require a higher fixture price, with no attempt to justify its value except on these points.

Economic operation from the standpoint of current saving is decidedly unimportant in home lighting. Few outlets are operated as much as five hundred hours per year, and therefore the total annual cost for current represents a small percentage of the initial cost.

Availability of Equipment: Except in built-to-order homes which are decidedly in the minority, lighting equipment must be flexible so that it can be installed when the home is already finished. Many of the most important advantages of fluorescent lighting can only be

achieved by built-in equipment. If this is done initially, the expense may be reasonable; if afterward, the expense is a real barrier to usage. The average builder has not as yet recognized lighting as a sales factor. This lack of planning automatically militates against anything that is not a package item ready to be attached to a standard outlet box.

While fluorescent fixtures of a package nature are gradually being made available, this field is virtually untapped.

Desk lamps have been available for some time and used extensively but other portable lamps are decidedly in the minority. Even in the bed-lamp field, where the light distribution from a tubular source and the lack of heat might be advantageous, few have been noted.

While fluorescent lamps have undoubtedly many distinct characteristics, their immediate use in the home seems to be largely confined to specialty utilization of these characteristics rather than broad applications. The factors which have made it a success in industrial and commercial fields are seldom repeated in the home.

Home lighting is based on the use of a large number of sources, with little real weight given to efficiency as such. A light source which represents a high initial cost must fall back on other factors than efficiency to justify its application. As equipment becomes available, there will be a certain amount of replacement of incandescent sources but this will be small compared to the total units involved.

The fluorescent lamp, by starting a trend toward more "built-in" lighting, may be important enough to make a real change in home lighting technique. Its shallowness, low bulb temperature, and comparable initial cost to built-in installations of incandescent may open the door to a field hitherto considered the special province of the wealthy. Undoubtedly, built-in lighting can never be as inexpensive as conventional lighting from fixtures and portables, but in its stimulation of thinking in terms of planned illumination, it may be a vehicle for real lighting progress.

YOUR BUSINESS AND THE ARCHITECT

WHEN a person is afflicted with a serious illness he consults a physician, and not a druggist. The doctor studies the condition of the patient, diagnoses the symptoms and prescribes the remedy. The druggist then compounds the medicine from the doctor's prescription. These facts are so generally understood and accepted that the laws in many states define the practices of the physicians and the pharmacists, and those laws require that the medical profession and not the druggist shall prescribe the remedies in cases of illness.

In undertaking the serious business of building, the intelligent business man will seek the professional advice and service of the architect, unless he is persuaded by high-pressure sales argument and pretty, stock sketches to consider building organizations which make their own plans. This owner is about to enter into a transaction involving a considerable sum of money; often it is the greatest financial investment of his entire career.

The architect, like the doctor, has the professional training and experience which qualifies him to serve best the needs of his clients. He will study building sites, the requirements of the owner, the operation of the industry or the business from all viewpoints. He will then select the proper site, prepare the most suitable layout, design the sanitary, electrical and mechanical equipment, specify the materials

best adapted to use and maintenance, design the exterior attractively and economically prepare estimates of cost, assist in arranging the financing when necessary, and finally he supervises the construction.

The architect, as the owner's agent, must have no financial interest in the building, or the materials or equipment which enter into it. His services, to be of value, must be entirely impartial and unbiased by personal financial considerations. His supervision of the work must be such as to require that the owner will receive what he pays for, without substitutions. The architect performs only a professional, personal service, and he has no proprietary interest in the building or its equipment.

Architects have repeatedly demonstrated to their clients, by their services, that a better building can be designed and constructed at a lower cost by the tried and proved method of competitive bidding by reliable contractors, from properly prepared and complete plans and specifications. Numerous instances of this kind have been reported where the savings to the owners by such a method have ranged from 10% to 30%. It is a fact, easily demonstrated, that an architect can save the owner the amount of his fee, and substantially more.

The builder, like the pharmacist in the above mentioned instances, is a necessary factor in any building enterprise, and it is important that he be reliable and conscientious. His knowledge and experience are most valuable, but in the interest of the owner, it is essential that he should have no proprietary interest in the building or its equipment. He should be held, by his contract with the owner, to produce the building exactly according to the plans and specifications prepared by the architect. The analogy is closely drawn to the relationship existing between the patient, the doctor and the druggist.

The facts stated above have also become so generally understood that a great many states have passed laws to protect the public safety and interest. These laws define the practices of architecture and building, and prevent the use of the title of architect except by those licensed to use it. The law prohibits a registered architect who is practicing architecture, from acting as a contractor. The New York State Court of Appeals recently ruled that an owner should not pay for professional services rendered by an unlicensed firm.

Obviously the owner's interests are more carefully considered and safeguarded when he employs an architect. The builder who prepares his own plans and specifications, offering the inducement of saving the owner the expense of all or part of the architect's fee, has a selfish interest in the project which he cannot overlook. By this method he evades any competition, and agrees to furnish what he chooses to furnish to an owner who is inexperienced in building, and therefore not qualified to determine. Furthermore the sub-contracts are often parcelled out to those who give the lowest bid regardless of quality of the job. As there is no supervision of the work, the owner is at the mercy of this type of builder.

The building industry, as a whole, recognizes the important position which the architect holds in reference to any building project, the nature of his services to the owner, and his responsibility under the law. The industry favors the maintenance of competitive bidding, and the elimination of irresponsible and inexperienced sub-contractors.

Good contractors prefer to build from plans and specifications prepared by architects, and under architects' supervision, for only thus can the owners' interests be properly safeguarded.

No matter how honest and trustworthy the contractor may be he is not in a position to represent the owner, no more than would be one lawyer to represent both sides in a court case.

From what has been stated, it can be readily understood that it is just as important in the interest of public health and safety, to engage the services of an architect when building, as it is to consult a physician when sickness comes, and just as mandatory under the law. These facts deserve careful consideration.

—Bulletin Michigan Society of Architects.

PRELIMINARY SKETCH, PROPOSED HOUSING SCHEME IN LAKE MERCED DISTRICT, SAN FRANCISCO

Leonard Schultze, Architect

A $12,500,000 HOUSING PROJECT FOR SAN FRANCISCO

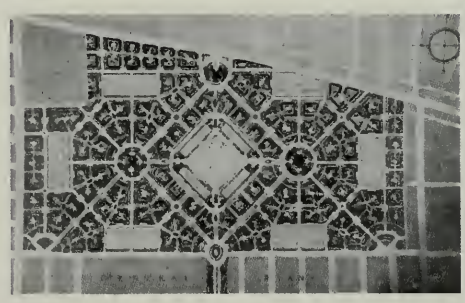
THE most ambitious privately financed housing project yet to be undertaken on the Pacific Coast, is announced by the Metropolitan Life Insurance Company of New York which plans to invest $12,500,000 in improving 200 acres in the Lake Merced district of San Francisco. The company proposes to build 2500 apartments with a total capacity of 11,000 rooms, exclusive of bath rooms. Construction is to be handled by Starrett Bros. and Eken, Inc., builders, of New York City, from plans by a New York architect, Leonard Schultze.

The buildings and other improvements will cost $11,500,000, exclusive of land.

The apartments will be two-story, class A buildings, designed along modern lines, and grouped around patios.

They will contain from three to six rooms each, and the rooms will average 200 square feet each.

All the units will have steel sash, oak floors and tile bathrooms.



PLOT PLAN

The buildings, under the plan, will occupy only 18 per cent of the ground area. The remaining area will be utilized for gardens, parks and recreational grounds for adults and children.

Construction will be completed in 12 to 16 months from starting time.

The need for such an ambitious housing scheme is emphasized by increased population due to war preparedness activities.

22 San Francisco Architects Awarded Housing Commissions

THE West's largest housing project to reach near completion stage is at Sunnydale in Visitacion Valley, San Francisco, where 48 acres have been improved with 772 apartment units from plans by Albert F. Roller and Roland I. Stringham, architects, and H. J. Brunnier, structural engineer. The February number of Architect and Engineer will describe this outstanding low rental housing project from the architect's viewpoint, with numerous illustrations of the different units, floor plans, plot plan, close-ups of interesting details, interiors, and a panoramic view of the entire acreage.

It is gratifying to note here the large number of architects who have been commissioned to handle the Sunnydale and other San Francisco housing projects, all working under the capable supervision of Albert J. Evers, director of the Housing Authority. The list includes:

PROJECT	ARCHITECT	STAGE
HOLLY COURTS	ARTHUR BROWN, JR., ARCHITECT HALL & PREGNOFF, ENGINEERS	COMPLETED
POTRERO TERRACE	FREDERICK H. MEYER, WARREN C. PERRY, JOHN BAKEWELL, JR., ARCHITECTS; HALL & PREGNOFF, ENGINEERS	85% COMPLETED
SUNNYDALE	ALBERT F. ROLLER, ROLAND I. STRINGHAM; H. J. BRUNNIER, ENGINEER	80% COMPLETED
VALENCIA GARDENS	HARRY A. THOMSEN, JR., W. W. WURSTER; H. J. BRUNNIER, ENGINEER	WORKING DRAWINGS
BERNAL HEIGHTS	CLARENCE A. TANTAU, WILLIAM G. MERCHANT	WORKING DRAWINGS
WESTERN ADDITION	LESTER W. HURD, JAMES H. MITCHELL	SKETCHES
DE HARO PLAZA	DOUGLAS D. STONE, CHARLES E. J. ROGERS	WORKING DRAWINGS
WOODLAND VILLAGE	TIMOTHY L. PFLUEGER, LEWIS P. HOBART	COMMISSIONED
NORTH BEACH	ERNEST BORN, HENRY H. GUTTERSON	COMMISSIONED
CHINATOWN	MARK DANIELS, HENRY T. HOWARD	SKETCHES
GLEN PARK	W. D. PEUGH, EDWARD B. PAGE	COMMISSIONED
OAKLAND (Peralta & Campbell Villages)	CARL WARNECKE, FREDERICK H. REIMERS, H. A. MINTON, JOHN J. DONOVAN & HUGH WHITE	20% COMPLETED

ARCHITECTS' BULLETIN

Issued For

THE STATE ASSOCIATION OF CALIFORNIA ARCHITECTS

Northern Section

STATE ASSOCIATION MEMBER OF THE AMERICAN INSTITUTE OF ARCHITECTS

Editor
Harris C. Allen

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ARCHITECTS' MEETING

THE joint fall meeting of the Northern Section of the Association and the Northern Chapter of the Institute was held November 27th, too late to be reported in the December Bulletin. It was a largely attended and enthusiastic meeting, doing full justice to the ample and surprisingly good "Dago" dinner at Veneto's Café. The setting of pseudo ruins lent an atmosphere of Bohemianism, quite appropriate to our profession (query: the Bohemianism, or the ruins?), and the program provided by Secretary Raney, who doubles in brass, was enjoyed by all. Who but Uncle John Bakewell would have offered "a set of false teeth" as one of the objects for a memory test? And Robert Stanton Drank to us Only with his Eyes in the best troubadorial style. Frank Beckmann gave a Pep Talk which was calculated to bring the most reactionary and sedentary architect out of his shell, and rooting (15 minutes a day, at least for the first week) for the prize of professional success and what have you. In short, the meeting fully lived up to the promise of its spectacular announcement.

Oh—there was no business transacted, except by passing the buck to the Executive Boards of the two organizations.

And Queen Elizabeth Boyter triple-played—as an architect, as representing the League of Draftsmen, and as the only lady.

The ——— tender did a good business.

APPRENTICE TRAINING

The National Defense Program has speeded up the training of craftsmen in the building trades, which is good news for all concerned in the future of the building industry. Locally, two items are of interest:

The San Francisco School Department has oppointed Harold W. Smith and Secretary-Manager Hague of the A.G.C. to act as members of the Trade Advisory Committee for Defense Training in the construction industry for the year 1940-41. This committee is part of the California Plan for Vocational Education in and for Occupations Essential to National Defense, and has been appointed in response to a resolution passed by the Joint Trade Advisory Committee at its recent meeting. The committee will consider many matters, chief of which will be the training of men now on WPA, CCC and NYA, to fit them for work in various defense industries, including construction. The United States Government has appropriated a total of $75,000,000 for training of eligible workers now on these various relief rolls and the plan is to get them into useful occupations.

The building industry in the Bay Area now probably has the most complete apprenticeship plan so far set up in this State. A book form, for use by apprentices, has been adopted. This book will be carried by all apprentices in place of the usual working card of a full-fledged carpenter, along with all other data relating to the apprentice's entry. Included will be the apprentice's wage schedule. No apprentice will be allowed to leave one employer without

that employer's consent and the book record will so show. The ratio of one apprentice to four journeymen will be maintained. The class attendance record required of all apprentices will be duly entered in the book, showing the number of school hours attended, which must be not less than 144 hours in any one year. Also apprentices will be required to work at the trade for a total of 6,240 hours during the entire apprenticeship period.

The plan is worked out in flexible form and will permit of apprentices over the age of 23 being admitted to apprenticeship on approval of the Joint Committee. Each county will have its own joint apprentice committee to operate the apprenticeship system in its territory and with the five county committees meeting as often as necessary to maintain standardization of practice in the Bay Area.

Strict enforcement of the plan and use of the books commenced January 1. Under same each apprentice will have a copy of his record from start to finish for each year, copy of the rules and regulations under which he is working, and certification of his work and status. The books will be printed in four different colors, one for each year of apprenticeship, therefore the employer will know at once the yearly rating and experience of the apprentice and on examination of the book can tell the rate of wage for which he is to work, etc. It is anticipated that many other districts in the State, and many other crafts of the industry, may wish to model their apprenticeship system largely along the lines of those now set up for carpenters.

RADIO PROGRAM

The matter of returning to members their subscriptions to our Radio Program which have been received since the last broadcast on September 15, 1940, was discussed by the Executive Board and it was agreed that such members be advised that, unless they request the return, this money shall be kept specifically for the contemplated renewal of the Publicity Program.

RECOGNITION

A letter has been prepared, addressed to those about to dedicate their completed buildings, asking that the architect be recognized at the dedication ceremonies.

PORTLAND COMPETITION WINNER

At its last meeting, President Glenn Stanton of Oregon Chapter, reported the result of the competition for the Stearns Memorial Fountain. A. E. Doyle & Associates were announced as the winners, with Roi Morin, George Wardner and Abbott Lawrence each receiving honorable mention.

IT'S MAJOR NORBERG NOW

E. L. Norberg, architect of Burlingame, is "in the service now," having been ordered to report at Fort Mason with rank of major in charge of new construction.

PACIFIC NORTHWEST REGIONAL MEETING

From snowy Eastern Washington, and from the City of Roses (Portland), architects gathered on November 23 and 24 to meet in Seattle—the first Pacific Northwest Regional Meeting of the American Institute of Architects to include the new Spokane Chapter, the Oregon Chapter, and the Washington State Chapter.

A tour of Seattle was made in two large chartered busses, and included a trip to the Federal Housing Project on Yesler Hill, the Lake Washington Floating Bridge and the Madison Park Housing Project. The Producers Council Club of Washington State was host at a 6 o'clock cocktail party, which was profusely attended by a mob of people, including some new faces. Dinner came next, followed by speech making and miscellaneous entertainment.

Mr. Loveless, in a brief description before starting a preview of "home made" movies said that Burma was the farthest east he had been on his travels, and that many strange things occur there. You go to bed Monday night, and wake up on Wednesday morning . . . or vice versa in the other direction. And one realizes that the world is a much larger place than ordinarily thought, for spots which look close together on the map might take days to travel between.

Burma from Singapore . . . then five days from Singapore to Rangoon. The procedure at every port being very complicated . . . quarantine officers, then immigration officials, passport inspection, necessity of reporting to the police within forty-eight hours after arrival, and reporting again upon leaving . . . stating the amount of money brought in and taken out.

These and other interesting facts were brought out by Loveless during the course of his motion picture display.

Glenn Stanton of Portland prefaced his remarks by saying that Sunday morning was not a very good time to think of our troubles, but went on to read a letter from the Michigan Society of Architects, one paragraph of which went as follows: "One of the most serious problems confronting us today is the intrusion of building organizations into the field of architecture. The Board has decided upon certain measures to stop illegal and competitive practice: publicity among laymen, and laying the matter before public officials." Mr. Stanton said that in the solution of this problem our Chapters might try advertising, or having radio broadcasts. "Along with advertising," he concluded, "we have to justify our message, and if our services are not superior to those of the people we are trying to supplant, all the educational program is worthless. If we can make our services better than that of untrained and unqualified people, this is our best line."

In connection with the difficulty and necessity of getting people to recognize the value of an architect's services, Harold Whitehouse, president Spokane Chapter, told the following succinct little story: An architect in Spokane was asked to give a talk to women of the

A. A. U. W. in the Art Section, and, thinking that this was a chance to educate a few people in how an architect works, he took with him the entire outline of a residence design, from the inception to the finish, including pencil sketches and detail drawings. He strung these around three sides of the lecture room, and then described how an architect works. There wasn't a woman there with any idea of how an architect carried on his work. They had previously had no realization of how thoroughly such a job is done . . . down to considering full-size moldings, shadow effects, proportion of each part to the others, the play of light and shade in the moldings on a mantel. When they realized how minutely an architect considers each small part of every detail, they asked, "Is that why it's so satisfying, then?" The speaker answered, "Yes, that's it." At the end of the talk, the women said as a body that they would never go ahead with a house without employing an architect.

This example, thought Mr. Whitehouse, shows that laymen in the main are amazed to find out what an architect is thinking . . . proving that we have a problem of education. Also he believes that the average architect too seldom digs down and donates enough money to the cause of architecture. Another aspect of our problem is that of the small house design and how this is to be controlled.

The conclusion of Mr. Whitehouse' talk was a plea for the revival of crafts in all lines. "The architect is one man who can do much to encourage arts and crafts in architecture and other lines. We need good wood carvers, stone carvers, etc., and we should keep alive the interest in these crafts."

SEATTLE WANTS CITY PLAN

Seattle is after a city planning program and backed by the Washington State Chapter, A. I. A., some early progress is looked for. An entire evening was recently given over to the subject with Patrick Hetherton of the State Planning Council, Olympia, the principal speaker.

Considerable financial help will be needed from the city authorities and the Chapter plans to sponsor a dinner this spring and invite key speakers to tell why city planning pays, the ultimate purpose being to start a demand for a real city plan in the Puget Sound city. Raising funds for the work was considered the most difficult part of the movement, the solution being to put the plan into the hands of the people.

Mr. Hetherton expressed belief that the cost of a planning commission staff would not be beyond the city's ability to raise funds. In Portland the planning budget was about $7,000 or $8,000 a year while in Los Angeles the budget was over $75,000 a year and they are saving a half million dollars annually by the use of the plan. A budget of $1,000 was estimated as the sum needed to get started in Seattle with an expenditure of $10,000 a year thereafter.

The importance of city planning was emphasized in the following letter addressed to Mr. Hetherton by Edgar Carter of the Royal Institute of British Architects:

"The United States Department of the Interior National Park Service has called the attention of the Royal Institute of British Architects to the report 'A Study of Parks, Parkways and Recreational Areas,' published by the State of Washington.

"We shall regard it as a very great honour if you can send a copy of this report to the Royal Institute. Despite the intensity of the war, people in this country are beginning more and more to bring their minds to bear on the planning problems which the war itself raises and we shall have to derive a great deal from the vast experience of American planners. Your collaboration by sending the R. I. B. A. a copy of your report will undoubtedly be of inestimable value."

STRUCTURAL ENGINEERS MEET

At the January 7th meeting of the Structural Engineers Association of Northern California, Engineers Club, San Francisco, Professor Lydik S. Jacobsen, Acting Head, Department of Mechanics, Stanford University, gave an interesting talk on some of the problems relating to the design of engineering structures which are subject to vibration caused by wind forces. The speaker demonstrated his talk with models, one of which was a dynamic model of a suspension bridge.

Professor Morrough P. O'Brien, Head of the Department of Mechanics, University of California, and Ernest Wright of the Pacific Gas and Electric Company, also took part in the program.

Those who saw the motion pictures of the Tacoma Bridge disaster as presented at the December meeting found unusual interest in observing the behavior of Professor Jacobsen's models.

SEATTLE HOUSING EXPOSITION

Preparations are under way for holding the third annual National Housing Exposition of the Pacific Northwest, Feb. 1 to 9, at the Civic Auditorium, Seattle. Executive offices are located at 410 Lloyd Building. The show is sponsored by the Seattle Master Builders and the Seattle Post-Intelligencer, and endorsed by the Seattle Building Trades Council, Seattle Chamber of Commerce and the Seattle Real Estate Board.

BREMERTON HOUSING PROJECT

A 600-dwelling low-cost housing project sponsored by the Housing Authority of the City of Bremerton, was started December 9th. The project is located on an 89-acre tract adjoining Bremerton on the north, situated between the city boundary and Oyster Bay, and between Arsenal Way and the Kitsap Highway.

MOIST AND STIFF

Neighbor: "Jones is planning a Christmas celebration. I see they're carrying in a yule log."

"That's not a yule log; that's Jones."

BAY BRIDGE 57 TIMES SAFER THAN AVERAGE HIGHWAY

THE chances of a person being either injured or killed in a motor vehicle accident on the San Francisco-Oakland Bay Bridge are about one-half what they would be on the average highway in California or the nation, according to a report of State Highway Engineer C. H. Purcell.

Supplementing this statement we might safely predict a still greater reduction in bridge accidents if in bad weather the upper deck of the bridge was used exclusively for one way travel for all vehicles and the lower deck for all traffic going in the opposite direction.

In his report, Mr. Purcell said:

"The Bay Bridge is the heaviest traveled toll structure in the world and one of the busiest of all highways. At the same time it is one of the safest, and a 4-year record shows that the chances of a person being either injured or killed on the bridge are about one-half what they would be on the average highway in the State or the nation. For the past 12 months even this record has been improved to the point where the relative chance of being killed in an accident on the bridge has been 1 to 5½ on the average highway.

"In 1938 a person could drive about 7,040,000 miles in California, or 8,020,000 miles throughout the United States, before expecting to be killed in an accident. In four years on the bridge he could have traveled 14,600,000 miles before anticipating a comparable fate. In the last year his chances on the bridge were far better and he could enjoy 39,000,000 life-safe miles.

"In 1938 the same person could drive an average of 380,000 miles on California highways before expecting to be injured in an accident. For the past four years he could drive 775,000 miles on the bridge before taking the same risk. In the last 12 months his chances on the bridge were not quite so good and he could expect injury after 625,000 miles.

"The accompanying table gives these facts in greater detail:"

SCHOOL OF ARCHITECTURE DISCONTINUED

The New York University School of Architecture and Allied Arts announces discontinuance of the School for an unstated period, due, according to the faculty, not to any dissatisfaction with the work of the School or its record, but based purely upon financial considerations.

In closing the School it is interesting to note a few of its achievements and what has happened to the graduates.

Questionnaires were sent out to 196 alumni who received the degree of Bachelor of Architecture through June, 1938. Of this number, 160 were returned. Of this group:

Forty-two are in independent practice.

One hundred twenty-one are employed by other architects or in allied fields, of whom ten are also working independently.

Sixty-one are Registered Architects licensed in New York, New Jersey and other states.

Two are employed and candidates for the degree of Master of Architecture at this school.

Two are studying for the degree of Master of Architecture at Harvard University and one is a candidate for that degree at the University of Pennsylvania.

Eighteen have had awards on competitions or exhibitions since graduation.

Thirty-six have had articles or photographs of their work published.

The School has contributed frequent winners to outside scholarships, including the Paris and Rome Prizes, Le Brun Scholarship, Beaux Arts Institute competitions, etc.

BRITAIN HONORS WRIGHT

King George VI has approved award of the royal gold medal for architecture to Frank Lloyd Wright, now of Phoenix, Ariz.

	United States for 1938	California for 1938	Bay Bridge Since opening Nov. 12, 1936 to Oct. 31, 1940	Bay Bridge Last 12 months October, 1939 to October, 1940
1. Vehicle miles	260,000,000,000	19,500,000,000	236,000,000	78,000,000
2. Total personal injury and fatal accidents	..	36,643	151	72
3. Fatal accidents	.....	2,550	10	2
4. Persons killed	32,400	2,775	16	2
5. Persons injured	. . . .	51,150	302	125
6. Vehicle miles per personal injury or fatal accident	.. . .	531,000	1,550,000	1,080,000
7. Vehicle miles per fatal accident	....	7,650,000	23,600,000	39,000,000
8. Vehicle miles per fatality	8,020,000	7,040,000	14,600,000	39,000,000
9. Vehicle miles per injury	....	380,000	775,000	625,000

CALIFORNIA ENGINEERS WOULD REGULATE PROFESSIONAL PRACTICE

THE various Engineering sections in California are sponsoring an Engineering Professional Act intended for ultimate approval by the State Legislature. A tentative outline of the Act has been prepared, together with arguments for and against the proposed measure. The digest has been submitted to all members by the respective member societies of the S. F. Engineering Council for consideration and comment. The proposed Act is still in process of study and revision, but general agreement has been reached with respect to the soundness of its principal features.

The following is a digest of the proposed Act, prepared by the Legislative Committee of the San Francisco Engineering Council, L. H. Nishkian, Chairman.

PREAMBLE

An act to create a public corporation to be known as the Professional Engineers' Association of California; defining its organization and powers; regulating the practice of professional engineering; and providing penalties for violation of the act.

ARTICLE I

GENERAL PROVISIONS: Any person, in a public capacity (with exceptions as given) who practices or offers to practice professional engineering in any of its branches shall submit evidence of his qualifications and be registered.

DEFINITIONS OF TERMS: Including "Association," "Board of Examiners," "Executive Council," etc.; in particular "Practice of professional engineering" includes any professional service, such as consultation, investigation, evaluation, design, or responsible charge of construction or operation, in connection with utilities, structures, buildings, machines, processes, work, etc., where the welfare or safeguarding of life or property is concerned, when such services require the application of engineering principles or data; non-resident engineers may be "licensed" to practice temporarily without being registered.

EXEMPTIONS: Does not affect the provisions of the existing Code relating to surveyors or architects; provides for registration of Structural Engineers; exempts those practicing on or in connection with property owned or leased by the individual or firm, unless such practice involves the health or safety of the public or employees; exempts employees of the U. S. government; exempts subordinates to a professional engineer; exempts real estate brokers or salesmen relative to appraisals or valuations in that capacity; exempts non-resident non-practicing Civil Engineers.

ARTICLE II

INCORPORATION: Constitutes the Association as a public corporation, with perpetual succession, which may sue and be sued, enter into contracts, hold real and personal property, etc.

ENGINEERING COMMISSION: The existing State Board of Registration for Civil Engineers shall constitute a commission to organize the Association and get it under way.

ARTICLE III

THE COUNCIL: The governing body of the Association shall be the Council of five members, one each from the Civil, Electrical, Mechanical, and Mining branches, one elected at large; members of the Council shall be nominated from and elected by the members of the Association in each respective branch of engineering; term of office initially two members for one year, two for two years, one for three years, thereafter a three year term for each; specifies compensation for time and expenses; vacancies to be filled by appointment by the Council; the Council is empowered to adopt and amend by-laws, rules and regulations, rules of professional conduct, wilful breach of which shall be punishable; the Council shall keep suitable records of its proceedings and a register of engineers licensed or registered under the act.

ARTICLE IV

OFFICERS: The President and one or more Vice-Presidents shall be elected by the Council from among its members; the offices of Secretary and Treasurer may be held by the same person, they may but need not be members of the Council.

ARTICLE V

ENGINEERS ENTITLED TO PRACTICE: Only registered members of the Association may use the title Professional Engineer or practice professional engineering.

PRACTITIONERS AT TIME ACT BECOMES EFFECTIVE: At any time prior to June 30, 1942, all registered Civil Engineers, and all other professional engineers who submit evidence of suitable qualifications and duration of previous practice (plus fee of $15.00) shall be registered; thereafter, registration shall be as prescribed hereinafter.

ARTICLE VI

REGISTRATION: Applications shall be made under oath, accompanied by fee; applicant must be at least 25 years of age and of good character, have had 6 years experience and direction of engineering work for one year; study in an approved engineering school comprises a credit toward said experience; provides for certificate of registration after examination as prescribed by Council, and for replacement of destroyed certificates.

RECIPROCITY: Council, upon payment of the registration fee, may issue certificates to anyone holding a certificate, under no lower standards, from other states, countries, or other proper authorities.

TEMPORARY LICENSE: May be issued, upon payment of prescribed fee, for not exceeding 60 days in any calendar year, to one who maintains no place of business in this state, and is legally qualified as a Professional Engineer elsewhere.

SEAL: Each registrant may obtain and use a seal of the authorized design during the life of his registration certificate.

PLANS, SPECIFICATIONS, REPORTS, DOCUMENTS: Such engineering papers shall be prepared by or under the direction of a registered engineer, and be signed or stamped by him.

PROOF OF REGISTRATION: A certificate in good standing shall be presumptive evidence in courts and elsewhere that the named person is legally registered.

ARTICLE VII

EXAMINATIONS: The Council shall set the times and places, and prescribe rules, regulations and scope, for regular examinations of candidates for registration and for re-examinations in case of failure; shall appoint annually a Board of Examiners for each branch of engineering recognized by it, who shall conduct the examinations.

ARTICLE VIII

COMPLAINTS AND INVESTIGATIONS: The Council shall receive, or may initiate, and investigate charges against registered engineers; in cases involving suspension or removal a hearing after specified notice to the accused, shall be held within

three months in the county where he does business, where he resides, or where the alleged offense was committed; the Council may appoint referees to take testimony, but shall not be empowered to delegate its authority to make findings of fact or to render judgments; the customary rules for counsel, attendance of witnesses, and production of documents apply.

PENALTIES: Council may reprove privately or publicly, or suspend or revoke the registration of any engineer who (a) has been convicted of a felony, (b) has not good character, (c) is guilty of deceit, misrepresentation, violation of contract, fraud, or gross incompetency in his practice, (d) is guilty of fraud or deceit in obtaining registration, or (e) is guilty of violation of the Rules of Professional Conduct.

APPEAL: Appeal from the orders of the Council may be made within three months to the Supreme Court, which may sustain, reverse, or amend the order or remit the case to the Council for rehearing.

ARTICLE IX

VIOLATION AND PENALTIES: It shall be a misdemeanor for any person to practice professional engineering who is not registered or exempted hereunder, falsely impersonates or uses the seal or certificate of another, uses an expired or revoked certificate, gives false evidence before the Council or Referees, or aids or abets another in violating this act.

PROSECUTION: It is the duty of officers charged with enforcement of the laws to prosecute violations of this act; no prosecution shall commence after two years from the date of the offense.

ARTICLE X

CERTIFICATES AND RENEWALS: Any certificate issued shall remain in effect until the following June 30th; renewals shall be issued at that date upon payment of prescribed fee.

REINSTATEMENT: Certificates which have expired for nonpayment of renewal fee may be renewed or reinstated within one year by payment of delinquency and renewal fees.

FEES: The fees are as follows:

(a) Application	$15.00
(b) Registration	5.00
(c) Duplicate certificate	1.00
(d) Temporary license	10.00
(e) Annual renewal	5.00
Council may increase to sum not exceeding	10.00
(f) Delinquency, $1.00 per month but not exceeding	5.00

STATEMENT OF RECEIPTS AND DISBURSEMENTS: Shall be prepared and certified under oath annually.

CIVIL ENGINEERS FUND: All funds accumulated under the Civil Engineers' Act shall be transferred into the treasury of the Association, to be used for putting this Act into effect and thereafter in carrying on its activities.

ARTICLE XI

REPEAL OF CONFLICTING LEGISLATION: The Civil Engineers' Act and all other laws or parts of laws in conflict herewith are hereby repealed.

ARTICLE XII

CONSTITUTIONALITY: If any part of this Act is found to be unconstitutional the validity of the remainder shall not be affected.

ARGUMENTS FOR THE ACT

Enactment of such a law will tend to safeguard the public's life, health, property and welfare.

Its operation will in time tend to weed out of general practice the incompetent and shyster, and so aid the reputable practitioner.

Thirty-eight states now have some form of regulation of engineers. This is a trend of the times, its adoption in some form is probably inevitable; it behooves the profession to guide such legislation into an acceptable and least onerous form.

The reciprocity features of such laws permit engineers to qualify lawfully for practice in other states, and are intended to prevent unqualified engineers from other states from practicing in this state.

The proposed law provides for self-regulation of the profession by a self-governing corporation, rather than by a political commission.

It safeguards the position of those now engaged in the practice of engineering, including the civil engineers now registered under their existing law.

It exempts from the necessity to register subordinates to professional engineers, and those practicing only on or in connection with property of the individual or firm.

The proposed fees for registration, renewal, etc., are moderate, and designed only to cover the cost of administration.

ARGUMENTS AGAINST THE ACT

Such registration in no way protects the public interest; there is no real need for this control, on behalf of either the public or the profession.

It represents one more step in the direction of regimentation: another bureaucracy with paid jobs and arbitrary authority.

It creates an additional financial burden, for which there will be no direct benefit to the profession or the individual.

It serves to add a little prestige to certain individuals who, because of their own shortcomings, might be unable otherwise to qualify as competent engineers.

The Civil Engineers have a satisfactory and beneficial law now, and should guard their existing privileges.

A proposed law should provide for defining the various branches of engineering and permit registered engineers to practice only in the branch or branches in which they are qualified.

DRAFTSMEN UNDER WAGE-HOUR LAW

Administrator Philip B. Fleming has advised the Seattle Association of Technical Engineers that draftsmen and engineers will not be regarded as professional workers exempt from the Wage and Hour Law, interpreting upon request, rules for exemption granted to administrative and professional employees.

The rules require that an exempted employee in this classification must receive at least $200 a month and must meet other requirements. Employees not exempted must be paid time and a half for overtime work in excess of 40 hours.

"Our information indicates that draftsmen are normally paid on an hourly basis and in general are employed in groups and perform routine work. Thus, in the vast majority of instances, draftsmen will still retain the benefits of the act even if they are paid $200 a month," Administrator Fleming said.

He noted exceptions such as the draftsman whose work was incident to duties connected with management policies or general business operations.

Among the Architects

JOHNSON NAMED CHAIRMAN, S.C.D.

Reginald D. Johnson, architect of Los Angeles, has been named chairman of the Housing Committee of the State Council of Defense. The appointment was made by Dr. Baldwin M. Woods, University of California professor and regional chairman of the National Resources Planning Board. Function of the committee will be to bring together local and Federal officials and all groups and individuals who will in any way be affected in any housing program. The committee will take up the most acute problems of providing adequate housing for defense workers in California, particularly San Diego, Los Angeles and Vallejo.

Members of the committee in addition to Chairman Johnson are:

L. D. Tilton, secretary, who is executive officer of the California State Planning Board; Grover T. Russell, Los Angeles, past president of the California Real Estate Association; R. A. McMullen of the Los Angeles Housing Administration; James G. Thimmes, acting state director of the Steel Workers' Union.

Langdon Post, state director of the United States Housing Authority, San Francisco; DeWitt McGuinness, regional director of the Federal Housing Administration, San Francisco; Chris Jones, past president of the California Real Estate Association, Sacramento.

John C. Austin, consulting architect, Los Angeles; Warren C. Perry, director of the School of Architecture of the University of California; Lottie L. Crawford, San Diego; David Goldman, Oakland, and Philip Norton, Los Angeles, liaison officer on defense housing.

CHARLES F. WHITTLESEY

Charles F. Whittlesey, 73, formerly of San Francisco and one of the first American architects to use reinforced concrete for design—employing exposed concrete surfaces with ornamentation cast in place—died in Los Angeles January 2.

Mr. Whittlesey was born in Alton, Ill., in 1867. In 1900 he was appointed chief architect for the Santa Fe Railway system. He designed the company's stations after the buildings of the Pueblo Indians, a style still employed by the railway.

In 1901 and 1902 he built the Alvarado Hotel and the railway station in Albuquerque, N. M., and the El Tovar Hotel in Grand Canyon, Ariz. A few years later he designed and directed construction of the Los Angeles Philharmonic Auditorium and the Hotel Huntington in Pasadena.

Coming to San Francisco in 1906 Mr. Whittlesey aided in the reconstruction of several buildings after the earthquake and fire, the Pacific Building being typical of his use of reinforced concrete.

HERE AND THERE

Geo. A. Sedgwick, formerly with the Division of Architecture, State of California, is now Associate Engineer with the Panama Canal Commission.

Ralph A. Tudor, engineer of maintenance and operation of the S. F. Bay Bridge, has been granted a year's leave of absence to become a lieutenant-colonel in the Army as assistant to the Chief of Staff at San Luis Obispo training camp.

William Arild Johnson has opened an office for the practice of architecture in Tacoma, after serving two years as assistant architect, Quartermaster Corps, U. S. Army, at McChord Field, where he was a member of the staff of Chief Architect Harold H. Ginnold.

"Architecture and Sculpture of the Mayas" was the subject of an address December 6 by Richard Lytel, architect, before the study club of the Seattle Art Institute at the Seattle Art Museum. He is a member of the firm of Lytel and Shorett, Securities Building, Seattle.

ARCHITECT HEADS ASSOCIATION

Frank V. Mayo, architect of Stockton, has been chosen to succeed L. A. Mills as president of the Stockton Apartment House Association. Here is a good example for other architects to follow. Participation in community welfare organizations will go a long ways in helping to popularize the profession.

BAIRD RESIGNS PRESIDENCY

At a meeting of the board of directors of the State Association of California Architects, Southern Section, December 13, the resignation of Merrill W. Baird of Glendale, as president and director, was received and accepted, and Rowland Henry Crawford of Beverly Hills, was elected to succeed Mr. Baird.

A STANFORD WHITE HOTEL

The historic Paso Robles Hot Springs Hotel, destroyed by fire December 12, was designed by McKim, Meade & White in 1889 and with its passing, but one of the old rambling structures of the period remains—the Hotel Coronado. Old timers recall when Paso Robles was the mecca of the social elite in the West.

BUYS INVESTMENT PROPERTY

Frederick H. Meyer, F.A.I.A., one of San Francisco's better known architects, recently purchased $60,000 worth of business property in Burlingame, which he plans to hold as an investment. Three stores are included in the purchase which is just off the El Camino Real intersection, heart of Burlingame's business center.

SOUTHERN CALIFORNIA ARCHITECTS DISCUSS CIVIC CENTER PLAN

The members and guests of Southern California Chapter of Architects were treated to an interesting talk by Langdon Post, regional director of the U. S. Housing Authority, at the Clark Hotel, Los Angeles, December 10. The Civic Center Plan was the subject under discussion and Mr. Post, a former member of the New York State Legislature and formerly chairman of the Housing Authority of the City of New York, complimented the Chapter on the thorough manner of handling the plan. In so many instances, he said, the architect has not thought ahead as to what effect his building would have on its surroundings.

Because of their technical knowledge, necessary to the rehabilitation and rebuilding of our cities, and their knowledge of social conditions, Post believes that architects are best fitted to take the lead in improving city planning and housing conditions. It was through the determined efforts of a few architects, he said, that we obtained our first zoning restrictions.

Conditions existing in some cities where the tendency is to spread out instead of improve within have become serious, according to Mr. Post. It is no longer a problem of expanding but one of salvaging; not growing, but taking inventory. We have everything good in urban centers except decent housing, he stated.

We must think in terms of living as well as terms of profit if we are to survive, Post declared, and if there is no profit in building housing for the poor we will have to provide them with housing anyway. Right now we are most interested in the national defense program, but we must not forget to build against the forces (moral decay) from within.

He revealed that 60 to 65 per cent of the funds expended by the housing authorities throughout the country have actually been used for slum clearance; that is, where old buildings have been demolished to make room for the new. Atlanta and Memphis were cited as being two of the many cities where housing projects are definitely of a slum clearance nature.

Mr. Post concluded his remarks with a brief explanation of the act that regulates defense housing and stated that, under the law, local housing authorities could be called on to act as agents for these projects.

The Chapter elected the following officers and directors for 1941: S. B. Marston, president; Palmer Sabin, vice-president; Donald B. Kirby, secretary; William H. Harrison, treasurer; Ulysses F. Rible, director for the three-year term. Samuel E. Lunden and Herbert J. Powell are the hold-over directors.

Interesting reports on the State Association of California Architects newspaper publicity program and radio work were made by Henry F. Withey and Walter Hagedohm. Associate members of the Chapter entertained the meeting with a humorous skit.

In addition to Mr. Post, other guests were: Roy C. Kelley, member of the Honolulu Chapter; Edward Killingsworth, holder of the Institute medal; Richard White, member of the State Board of Architectural Examiners; Earl Anderson, secretary of the Construction Industries Committee of the Los Angeles Chamber of Commerce; and Aleck Curlett, Walter Hagedohm and Amos W. Randall, local architects. H. B. Marston presided.

"FROZEN MUSIC"

Giving his impressions of a meeting of architects and realtors at Dayton, Ohio, recently, William Henry wrote the following in the Dayton Journal-Herald:

"A whole lot of people in the world don't seem to think that architects are necessary, with the result that certain homes on principal residence streets in Dayton are about the ugliest ever seen. There's one three blocks from us, and it's built rather 'slaunch-wise' and on the bias; my wife and I call it 'the hippopotamus,' because it's so ugly. It may suit the owner to perfection, but I'll bet its resale value—and who knows when he may have to sell?—isn't one-tenth of its cost.

"On the other hand, there are many perfectly charming homes throughout the neighborhood. My wife and I just like to walk around and look at them. To us, they are beautiful as a fine poem or as the best music by the great masters. They are literally 'music frozen in brick and stone,' and are a joy forever.

"There's a close kinship here, for there's rhythm and lilt in brick and mortar and in fine architectural lines, as well as in music.

"Did you ever walk through the great portals of the Lincoln Memorial without experiencing a tremendous thrill? Or ride out Grand Boulevard in Detroit toward the high towers of the Fisher Building? Or stand with head bared before the Nebraska state capital? These are experiences of a lifetime. Great moments to be remembered.

"The other Sunday or so, I published a picture in the Herald of a home built several years ago. Not being new, it probably had little place on the pages of a newspaper. But it was so beautiful, so appealing, so admirably designed to fit its site, its materials, its terrain and its purpose, that it just literally reached out and grabbed my attention as I drove by and I couldn't help taking its picture. Little homes as well as mighty structures can be a lasting source of inspiration."

GRAMMAR SCHOOL BUILDING

A $50,000 grammar school is to be erected at Salinas for the Alisal Grammar School District from plans by William H. Rowe, 127 Montgomery Street, San Francisco.

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Bond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.00
3 ply per 1000 ft. roll	6.25
Sisalkraft, 500 ft. roll	5.00
Sash cord com. No. 7	$1.20 per 100 ft.
Sash cord com. No. 8	1.50 per 100 ft.
Sash cord spot No. 7	1.90 per 100 ft.
Sash cord spot No. 8	2.25 per 100 ft.

Sash weights cast iron, $50.00 ton.
Nails, $3.50 base.
Sash weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
City gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

SAND—	Bunker	Delivered
River sand	$1.50	$1.90
Lapis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80 and $2.20	
Del Monte white	50c per sack	

CEMENT (all brands, common, cloth sacks) $2.72 per bbl. f.o.b. car; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or deliv., 80c per sack. (Less 10c per sack returned, 2% 10th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White } 1 to 100 sacks, $2.00 sack, warehouse or delivery;

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.
(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	⅝x2¼" T&G	⅜x2" T&G	⅝x2" Sq. Ed.
Clr. Otd. Oak	$144.00 M	$122.00 M	$141.00 M
Sel. Otd. Oak	118.00 M	101.00 M	114.00 M
Clr. Pla. Oak	120.00 M	102.00 M	115.00 M
Sel. Pla. Oak	113.00 M	92.00 M	107.00 M
Clr. Maple	125.00 M	113.00 M	

Wage—Floor layers, $10.00.

Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$30.00 per M
No. 2 common	28.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	22.00 per M
1x4 No. 2 flooring VG	58.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	70.00 per M

Slash grain—

1x4 No. 2 flooring	$45.00 per M
1x4 No. 3 flooring	42.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.10 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded)
5/16" 3-ply and 48"x96" ..... $32.50 per M

"Plywall" (wallboard grade)—
¼" 3-ply 48"x96" ..... $37.50 per M

"Plyform" (concrete form grade)—
⅝" 5-ply 48"x96" ..... $110.00 per M

Exterior Plywood Siding—
7/16" 5-ply Fir ..... $ 90.00 per M.
Redwood (Rustic) ..... 85.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $100.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high, per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot. Rough and finish about 75c per sq. ft.

Labor—Rough carpentry warehouse heavy framing (average), $17.50 per M.

For smaller work average $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work	per yard 42c
Three-coat work	per yard 60c
Cold water painting	per yard 10c
Whitewashing	per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.50
2 coats, lime mortar hard finish, wood lath	.85
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	.90
Ceilings with ¾ hot roll channels metal lath plastered	1.80
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.30
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.40
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50

Wood lath, $5.50 to $6.50 per 1000.

2.5-lb. metal lath (dipped)	.19
2.5-lb. metal lath (galvanized)	.21
3.4-lb. metal lath (dipped)	.22
3.4-lb. metal lath (galvanized)	.24

¾-inch hot roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations.
$13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.60 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—
From $70.00 per fixture up, according to grade quantity and runs.

Roofing—
"Standard" tar and gravel, $6.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $6.50 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Cooper, $16.50 to $18.00 per sq. in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ... 8.00 Square
5/8 x 16" — #1 Cedar Shingles, 5" Exposure.... 9.00 Square
4/2 #1-24" Royal Shingles, 7½" Exposure ... 9.50 Square
Re-coat with Gravel, $3 per sq.
Asbestos Shingles, $15 to $25 per sq laid.
Slate, from $25.00 per sq., according to color and thickness.
1/2 x 25" Resawn Cedar Shakes, 10" Exposure ... 10.50
3/4 x 25" Resawn Cedar Shakes, 10" Exposure ... 11.50
1 x 25" Resawn Cedar Shakes, 10" Exposure ... 12.50
Above prices are for shakes in place.

Sheet Metal—
Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware. $1.75 per sq. ft.

Skylights—(not glazed)
Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural
$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—
$80.00 to $120.00 per ton, set.

Stone—
Granite, average, $6.50 cu. foot in place.
Sandstone, average Blue, $4.00, Boise, $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—
Copper sash bars for store fronts, corner center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.— (See Dealers)
Asphalt Tile—18c to 28c per sq. ft. installed.
Wall Tile—
Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—
40c per square foot and up. Installation extra.

SAN FRANCISCO BUILDING TRADES WAGE SCALES

All crafts 8 hour day (except as otherwise noted) and 5 day week. Effective as of May 1, 1940.

CRAFT	Journeymen Mechanics
Asbestos Workers	$10.00
*Bricklayers	10.50
*Bricklayers' Hodcarriers	7.50
Cabinet Workers (outside)	10.00
Caisson Workers (Open)	8.80
Carpenters	10.00
Cement Finishers	10.00
Electricians	11.00
Elevator Constructors	12.00
Engineers (Portable and Hoisting)	10.00
Glass Workers	9.68
‡Housesmiths, Ornamental Iron (Shop and Outside)	10.00
Housesmiths, Reinf. or Rodmen	10.50
Ironworkers (Bridge and Structural—Engineers)	12.80
Laborers (Building and Common)	6.50
*Lathers	9.60
Marble Setters	10.50
Millwrights	10.00
Mosaic and Terrazzo Workers	8.00
†Painters	8.75
Pile Drivers and Wharf Builders	11.20
Pile Drivers Engineers	12.80
*Plasterers	10.00
*Plasterers (Hodcarriers)	8.40
Plumbers	11.20
Roofers	10.00
Sheet Metal Workers	10.00
Sprinkler Fitters	11.00
Steamfitters	11.00
Stair Builders	10.00
Stone Cutters	9.00
*Stone Setters	10.50
Tile Setters	11.00
Welders, Structural Steel Frame on Buildings	12.80
§Dump Truck Drivers, 2 yards or less	7.00
§Dump Truck Drivers, 3 yards	7.50
§Dump Truck Drivers, 4 yards	8.00
§Dump Truck Drivers, 5 yards	8.00
§Dump Truck Drivers, 6 yards	8.50
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	8.00
3 yards	8.57
4 and 5 yards	9.14
6 yards	9.71

EXPLANATION:
*—6 Hour Day.
†—7 Hour Day.
‡—Term "Architectural Iron" no longer used. This craft "Ornamental Ironworker."
§—Dump Truck Drivers work 7 HOURS ON PUBLIC WORK, 8 HOURS ON PRIVATE WORK; starting time 7:30 A.M.

SUMMARY OF MAJOR DEFENSE PROJECTS ON PACIFIC COAST

AS the government's defense program gets further under way and details of building units take definite form, the professions are beginning to hear from the powers that be; applicants for architectural and engineering positions are actually getting jobs!

The summary of Federal work on the Pacific Coast, printed in this article, will give the reader some idea of the volume and cost of improvements already started or about to start, and besides the work listed it is encouraging to know that there are substantial projects still to come. To date, approximately 30 large cantonments of the Army program are now under construction in various parts of the country. These will house a minimum of 20,000 men each and some will house as many as 40,000. In the average cantonment there will be as many as 800 to 900 buildings, for which the standard plans have been developed by the War Department prior to the present emergency. And thus the problem becomes one for engineers and landscape architects and town planners. Fortunately there is an increasing attention to site planning problems. The present program calls for facilities for approximately 1,250,000 men, and if, as seems likely, the emergency increases there may be a considerable expansion in the cantonment program.

A story that some government officials are favoring the employment of professional planners provided they accept minimum compensation for their services, is denied by those in a position to know. Anyway there would seem to be no more reason for an architect or engineer to donate his services to the government at a time when no particular emergency exists, than for the contractor who submits a competitive bid to offer his talents for anything less than the accepted standard scale.

Besides cantonments, air fields, and major defense projects listed, there are defense housing units of considerable magnitude still awaiting official approval as to location and size.

Announcements in the East state that emergency courses to train engineers and technicians, urgently needed in the nation's defense industries, will be offered soon in a cooperative program sponsored by Harvard University, Massachusetts Institute of Technology, Northeastern University, and Tufts College.

Following is a list of some of the major cantonment and housing projects on the Pacific Coast under way or about to start:

Name of Project	Location	Estimated Cost	Designers or Builders
Camp San Luis Obispo	San Luis Obispo, California	$4,341,000	Leeds, Hill, Barnard & Jewett, Los Angeles; L. E. Dixon Company, Los Angeles, Contractors
March Field, A. A. Firing Center	Riverside, California	2,514,000	J. B. Lippincott & O. G. Bowen, Los Angeles
Douglas Airplane Plant	Long Beach, California	8,684,000	P. J. Walker Company, Los Angeles, Contractors
Nacimiento Replacement Center	San Miguel, California	6,018,733	Holmes & Narver, Los Angeles; Ford J. Twaits & Morrison & Knudsen, Contractors
Permanent Tent Camp	Paso Robles, California		Leeds, Hill, Barnard & Jewett, Los Angeles
Portland Air Corps Cantonments	Portland, Oregon	1,316,000	Lawrence, Holford & Allyn, Portland, Oregon
San Diego Replacement Center	San Diego, California	2,585,000	Myron Hunt & H. C. Chambers, Los Angeles
Umatilla Ordnance Depot	Morrow and Umatilla Counties, Oregon	9,200,000	Stevens & Koon, Portland, Oregon
Camp Ord	Monterey, California	7,000,000	Ford J. Twaits & Morrison & Knudsen, Los Angeles, Contractors
Ship Building Plant	Richmond, California	8,000,000	Todd-California Shipbuilding Company, H. J. Kaiser, President
Fifty Housing Units, Benicia Arsenal	Benicia, California	172,000	Fred J. Early, Jr., San Francisco, Contractor

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

492. VOICE-POWERED TELEPHONE

One of the most interesting features contained in International Nickel Company's fourth quarter 1940 bulletin titled "Inco" is the story concerning the telephone which will carry the voice 200 miles yet operates without electricity. You can have a copy by indicating your desires on the coupon below.

493. NEW WEATHER STRIPPING

The Protex Weatherstrip Manufacturing Company announces a new combination unit of weatherstrip and spring sash balance which makes double-hung sash weather-tight at the jambs and does a perfect balancing job of both upper and lower sash at the same time. Check the coupon below.

494. MANY USES FOR COPPER

"The House You Live In" is still one of the most popular booklets on our list. It is issued by Revere Copper and Brass, Incorporated. It reminds you of the multiple uses of copper in the home and the practically indispensable role it plays in the building industry. You can still get a copy.

495. MOLDED PLASTICS

Of course you will be interested in the very latest developments in the plastic field. Here is an absolutely superb brochure of 32 pages, done in four color process printing that tells you everything about plastics. Highly recommended. Send the coupon below. It is issued by the Bakelite Corporation.

496. PITTSBURGH ISSUE

The latest issue of "Pittsburgh Plate Products" is now out. Issued by Pittsburgh Plate Glass Company, every article is of interest to the architect. We like, for instance, the one on sculptoring and styling of new automobile designs from drafting board to finished product.

497. SLIDE RULES

Don Herold's inimitable drawings illustrate the clever little booklet just issued by Keuffel & Esser Company. You are right; it's about slide rules and Don Herold shows you how to choose one. The coupon below will bring you the booklet.

498. ELECTRIC GARAGE DOOR

Are our readers interested in learning more about an improved electric operator for residential garage doors? Barber-Colman Company can tell you a lot about their new, almost noiseless electrical device with a rubber cushioned motor. The coupon will bring information.

499. MOTOR CONTROL ENGINEERING

Engineers, especially those involved in electrical work, will welcome Cutler-Hammer's latest bulletin titled "Unitrol." It covers a revolutionary new advance in motor control engineering. The booklet will be sent free, of course. Check coupon.

500. FLUORESCENT LIGHTING

Chuck full of helpful technical data and interesting suggestions for lighting problems, the new Guth catalogue covers a most complete line of fluorescent fixtures with patented reflectors. You should have it for your product reference file.

501. ELECTRIC ERASERS

It wasn't long after we bought our first electric razor when we gasped at the sight of the electric toothbrush. Now they have brought out a new shaft-driven electric eraser for architects and draftsmen. Can you imagine it. It's the Burning Hollow Shaft Electric Eraser. Send in the coupon.

502. BLUEPRINT CABINET

We don't think you ought to pass this one up if storage space for your plans is becoming a problem. All-Steel Equip Company certainly has the answer to the architect's cabinet problems in a four page folder which came off the press recently. A suggestion is that you write in for it.

503. PAINTING

Not all of you, of course, are concerned with defense work in the government's new architectural and building program but nevertheless, the latest issue of New Jersey Zinc Company's "Paint Progress" contains other articles as well which are of prime interest to architects and engineers. A copy can be had for the asking.

504. ABC'S OF PLASTERING

Prepared primarily to assist architects in inspecting and in getting good plastering, this booklet stresses the fundamentals of plastering and gives the reasons for certain minimum requirements which must be observed if a good job is to be obtained. It is issued by the Gypsum Association. You can get it into your files by using the coupon below.

505. HEATING

A lot of new literature on heating has been made available during the last several weeks. Some of the best we have seen has been put out by Modine Manufacturing Company, in which is described both horizontal and vertical delivery unit heaters.

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Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

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SUMMARY OF MAJOR DEFENSE PROJECTS ON PACIFIC COAST (continued)

Name of Project	Location	Estimated Cost	Designers or Builders
550 Housing Units	Fort Ord, Monterey, California	1,650,000	To Be Awarded
150 Housing Units	Fresno Municipal Airport, California	450,000	To Be Awarded
150 Housing Units	Riverside (March Field), California	450,000	To Be Awarded
3000 Housing Units	San Diego, California	9,070,000	McNeil Construction Company & Zoss Construction Company, Los Angeles, Contractors
175 Housing Units	San Rafael (Hamilton Field), California	550,000	To Be Awarded
100 Housing Units	Stockton Airport, California	300,000	To Be Awarded
150 Housing Units	Moffett Field, Sunnyvale, California	450,000	To Be Awarded
950 Housing Units	Vallejo, California	3,000,000	To Be Awarded
800 Housing Units	Bremerton, Washington, Navy Yard	2,500,000	To Be Awarded
250 Housing Units	Fort Lewis, Washington	750,000	To Be Awarded
150 Housing Units	McChord Field, Washington	450,000	To Be Awarded
1000 Housing Units	Oahu, Hawaii	3,000,000	To Be Awarded
550 Housing Units	Honolulu & Fort Kamehomeha, Hawaii	1,717,000	E. E. Black, Ltd., Honolulu, Contractors
Quay Wall, Piers & Dredging	Mare Island, California	3,300,000	Henry J. Kaiser Company, Oakland, Contractors
Naval Facilities	Pearl Harbor & South Sea Islands	66,000,000	Hawaiian Dredging; Raymond Concrete Pile Co.; J. H. Pomeroy; Morrison & Knudsen; Turner Construction Company, Alameda
Cantonment Hospital	Santa Barbara, California	1,000,000	Allison & Allison, Architects; Baruch Corporation, Los Angeles, Contractors
Assembly Shop	San Francisco (Hunters' Point)	660,000	Barrett & Hilp, Contractors
Army Cantonment (Hospital)	Fort Lewis, Washington	1,500,000	MacDonald & Kahn, San Francisco, Contractors
Miscellaneous Buildings	Canal Zone	1,128,000	N. P. Severin, Chicago, Contractors
Transit Shed & Pier	San Diego, California	1,530,000	Mojave Corporation; Person & Hollingsworth Company, Los Angeles, Contractors
Transit Shed	Oakland, California (Naval Supply Base)	395,000	K. E. Parker Company, San Francisco, Contractors
Four Hangars	Canal Zone (Howard Field)	1,450,000	N. P. Severin Company, Chicago, Illinois
Naval Air Base	Alameda, California	9,000,000	Johnson, Drake & Piper, Oakland, Contractors
250 Housing Units	Mare Island, California	858,000	Cahill Bros. & Ben C. Gerwick, San Francisco, Contractors
600 Housing Units	Alameda, California	1,897,000	Johnson, Drake & Piper, Oakland, Contractors
Army Cantonment	San Diego, California	2,199,492	W. E. Kier Construction Company, San Diego, Contractors
Two Hospitals	Canal Zone (Fort Clayton & Gulick)	4,115,478	MacDonald Construction Company & G. L. Tarlton, St. Louis, Contractors
Aviation Storage Facilities	Oakland, California	1,800,000	Clinton Construction Company, Contractors
Cantonment Type Hospital	Vancouver, Washington	750,000	L. H. Hoffman, Portland, Oregon, Contractor
Aviation Facilities	Oakland, California	700,000	Dinwiddie Construction Company, San Francisco, Contractors
1400 Housing Units	Canal Zone (Coco Solo & Balboa)	4,224,000	Leonard Construction Company, Chicago, Illinois, Contractors

HOME OWNERS REPAY BILLION IN CASH TO UNCLE SAM

LESS than eight years ago, American families were seeing their homes go to foreclosure at a rate of 1,000 a day and the giant Home Owners' Loan Corporation, established by Congress in a desperate relief effort, began refinancing mortgages that no one else could or would handle.

When it got through trading more than $3,093,000,000 in bonds for more than a million "bad loans," the HOLC had in its possession merely a lot of paper that no orthodox financier could look at without a shudder.

But a New Year glimpse at the records shows some strange but reassuring results from this unorthodox emergency financing:

1. Nearly one out of every 10 of the "hopeless" loans of the HOLC has been crossed off the books, stamped "paid in full."
2. Nearly $1,000,000,000 of the principal debt has been repaid and applied to the retirement of the Government's bonds.
3. An additional $770,000,000 has been paid in interest to defray the costs of a "noble experiment" which proved practical.

To achieve this record, 90,000 original HOLC borrowers have paid their loans in full. Approximately 10,000 other accounts have been terminated by cash sales of properties by the HOLC.

More than 725,000 original borrowers still are retaining their homes—and today private financing agencies, which couldn't have afforded to give them a glance a few years ago, would gladly give credit to the great majority. In all, original borrowers have paid in about $865,000,000 of their principal debt.

Some 180,000 homes have been foreclosed and acquired by the HOLC; about 127,000 of these have been sold to new home seekers, who already have paid in over $112,000,000 on their contracts.

"Enough time has passed to permit a thoughtful evaluation of the legislation adopted by Congress in 1933 to help the nation's hard-pressed home owners," said Charles A. Jones, General Manager of the HOLC.

"Almost everyone praised the HOLC at the start, when it began its great salvaging task. But later came criticism that it was another waste of Government money; then, finally, the accusation that Uncle Sam had become a 'Shylock,' taking away the homes of the people he had pretended to help.

"From a financial angle, it can be recalled that the HOLC helped halt the collapse of the real estate market and did a great part in bolstering the entire economic structure. In exchange for defaulted mortgages, it disbursed nearly a billion dollars to banks and trust companies, $767,000,000 to savings and loan associations, $192,000,000 to mortgage companies, $164,000,000 to insurance companies—helping them to become liquid, grant leniency to other home owners, and to release funds to their investors.

"Its 15-year, amortized, monthly payment mortgages, bearing an interest rate of 5 per cent, were the most liberal ever granted. Loans were scaled down at the start about $200,000,000. HOLC borrowers have saved $400,000,000 in interest alone and other home owners benefited almost to the same degree as interest rates were lowered on all home mortgages within a few years. The HOLC disbursed $220,000,000 for the payment of delinquent taxes. It directed the spending of $78,000,000 to repair and recondition its borrowers' homes and has spent an even greater amount to improve the homes it has acquired—all contributing to protection of neighborhood values.

"No one questions now—or if they do, they have forgotten a lot of things—the contributions of the HOLC to our general economy and to financial institutions. But let me give the human story behind these operations.

"The average borrower was two years delinquent in both principal and interest, between two and three years in arrears in taxes and without private credit, when he was refinanced. He was, in the main, a victim of circumstances beyond his control. All he asked was a chance to rehabilitate himself—and that is what the Government gave him.

"What kind of men and women were these borrowers? The story of what they have accomplished provides the answer. Did they appreciate the help they were given, or did they become leeches, looking to the Government for more and more aid? Their accomplishments provide the answer to that question, too. Every borrower who has retained his home has paid his own way, through an equitable interest rate—once 5 per cent, now 4½ per cent.

"And these borrowers have proved grateful. Through the vast volume of letters on file runs a note of pride that the writers have overcome or are overcoming their difficulties, and a note of gratitude that they were given a chance."

This letter was addressed to the President of the United States, "Most Honorable and Respected Sir:

"Should this letter really reach your eyes, which would give me a great thrill, I would have to ask your forgiveness right away for taking up even a few minutes of your most valuable time. . . .

"About a year ago, the Home Loan served me with foreclosure. . . . With earnest prayer, I wrote a letter to you and sent it off. God bless the person who received that letter and sent it in the right direction, for

very promptly the Home Loan sent one of their men to my home, with the wonderful news, that they were forwarding me the money on my loan to clear up all my city taxes and my arrears and would not charge the extra interest for two years, but that I would have to pay $8 extra a month, but this would be used to pay my own taxes so that I would not have to fear the city any more. . . .

For five months, I was not able to pay the extra money. It grieved me much and I prayed with agony. I received reproaches from the Home Loan but one day I rented my nicest room, long empty . . . and in five months my arrears were wiped out. . . .

I weep with joy to think my home is mine once more. All my relations have gone on. I am the only one left, 65 years old. . . . If you could have seen my garden last summer, in which I worked with great joy knowing it was mine once more, you would have known it was worthwhile to have preserved it for me, with its pink and red ramblers . . . and if you could have known the happiness in my heart when I sat on the porch on moonlight nights, drinking in the fragrance of the tuberoses, you would have been pleased to think that the magic of your name had preserved all this for me although you knew nothing about it, and therefore I am venturing to hope that you will get to know about this because I think it would please you and perhaps refresh you a few moments from the awful heavy burdens you are carrying for this nation."

More routine are some of the others, but expressing the same thought.

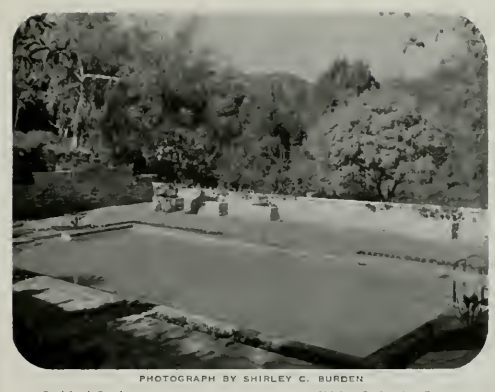
This one, though brief, is probably as eloquent as any in the HOLC's great files:

"Words are such futile instruments of expression when one wants to say 'Thanks' so very hard . . . "

"Not all HOLC borrowers have been able to save their homes, of course," said Mr. Jones. "More than 180,000 properties have been acquired by the Corporation through foreclosure and voluntary deed. Many of these were abandoned by people who early gave up their fight. Some were foreclosed after the death of owners and the refusal of heirs to assume their burdens. Far more were foreclosed on people who had the means to pay their way out, but refused to cooperate—demanding a gift from Uncle Sam."

SOAP SCULPTURE COMPETITION

Having recently distributed $2,200 in total awards for winning soap sculptures, the National Soap Sculpture Committee announces the opening of a new competition, seventeenth in the annual series, to close May 15, 1941. Designers, craftsmen, or students with ability to fashion creditable statuary from standard-sized cakes of white soap, may secure fuller details on this competition from Henry Bern, Committee Secretary, 20 East 11th Street, New York, N. Y.



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PRIZES FOR A SUGGESTION

C. Donald Dallas, President of Revere Copper and Brass Incorporated, has replied to William S. Knudsen's plea to "forget everything except the welfare of our country" with the announcement of a $10,000 award for the best suggestions to aid in speeding up the American industrial defense program, submitted by workmen in the metal industry in this country. Prefacing his offer Mr. Dallas says:

"In literature which will be ready for distribution within a few weeks, we are going to emphasize especially to all men in the metal working industries applying for the Revere Award, that their ideas do not have to appear to them to be big or revolutionary. They do not have to deal with weapons, munitions or any other machine or article used directly by our armed forces. The split washer, for example, is a good illustration of a practical discovery which speeds up many phases of machine production, because of its broad and extensive application.

"We have already secured the cooperation of a large number of industrial organizations in our attempt to reach as large a number of applicants for the Award as quickly as possible and so lose a minimum of valuable time. This will be accomplished at first principally by means of notices carried on plant bulletin boards. These will be accompanied by circulars giving complete information about the Award and containing application forms for the $5,000 first prize and the additional prizes graduating down to $250."

AN APPEAL TO AMERICAN ARCHITECTS

Editor Architect and Engineer:

May I urge you to publish in your forthcoming issue, in a prominent place, an appeal to all the architects of the United States?

At a recent meeting of the New York Chapter of the American Institue of Architects, the following resolution was made, seconded and unanimously carried:

"RESOLVED that Mr. Lescaze, together with the President of the Chapter, be authorized to organize a fund to be known as the U. S. Architects' Fund for R.I.B.A. children, and for that purpose to send out an appeal to all architects.

"BE IT FURTHER RESOLVED that all monies received from this appeal be deposited in a separate account, which shall be closed before January 30, 1941, by sending the total amount, less expenses incurred, to the R.I.B.A. to be used in their discretion for children of their members."

I need not tell you of the difficult circumstances in which some of our colleagues—the architects of Great Britain—find themselves. It is true that times are also hard for some of us here but we all appreciate that their lot is infinitely worse than ours. Let us hope that all the architects in the United States will want to contribute to this fund. Contributions in any amount will be gladly received. Checks should be made out to the

U. S. Architects' Fund for R.I.B.A. and should be mailed to the New York Chapter, A.I.A., 115 East 40th Street, New York City.

With kind regards,

Sincerely yours,

WILLIAM LESCAZE.

New York, Dec. 31, 1940.

SPECULATIVE HOUSES ON THE INCREASE

More houses will be built speculatively during the next few years than in recent years, according to the report of the Committee on Construction Loan Policies and Procedures of the United States Savings and Loan League.

"Conditions have changed to the extent that only 50 per cent of the homes erected today are built to order for an owner, the balance being built speculatively by operative builders who build from one to three hundred houses a year," said the report.

In its study of savings and loan associations, the committee found that 80 per cent of those interviewed already make loans to wholesale builders.

Much emphasis of the report was on the time which elapses between the application for a loan and the commitment by the lender. In their survey they found that 40 per cent of the building and loan associations interrogated are prepared to give commitments within twenty-four hours, and 65 per cent of them within forty-eight hours after the loan is applied for. All but one of the associations which reported give commitments on loans within a week, it was pointed out.

Fifteen years is the average loan term reported by the associations, with twenty years the most frequently reported maximum loan term. Clinging to their preference for the moderately long-term loan as the more conservative type of lending, many association managers differentiate between the owner-builder and the speculative-builder to the tune of about five years' shorter average maturity on the speculator loans.

"The public needs a great deal of education upon the importance of better construction," the committee continued. "This committee has studied individual associations which have employed on a salary or fee basis, architectural talent to assist prospective borrowers who are financing their homes through the associations. It is also a protective measure to the association in seeing that a sound house develops, which in turn makes a satisfied borrower. It behooves the individual associations to check and recheck plans, specifications and methods of construction in order to be assured of perfect or nearly perfect completed houses upon which they loan money."

The committee studied total contracts awarded for one- and two-family home building last year in the light of savings and loan association disbursements for new construction. Out of $665,000,000 in new construction of homes in cities of 10,000 and over in 1939, the financing from savings and loan institutions was 45 per cent, or $301,000,000.

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RUNNING FIRE

(Continued from Page 1)

• *EMERGENCY LEGISLATION NEEDED*

My bootblack is a temperate and industrious man. Not that temperance and industry must go together but it just happens that way in this instance. I often see him at noontime sitting on the little stool at the end of his stand drinking orange juice from a pint milk bottle. Orange juice in a milk bottle looks exactly like yellow liquid shoe polish, and each time I see him at lunch I shudder for fear he is drinking out of the wrong bottle. For some time past, whenever I have seen him drinking his orange juice, I have hesitated long enough to make sure he has not gotten his bottles mixed.

The last time I saw him was the day before Christmas. Today, as is usual, is the last of the month, which is the deadline for "Running Fire," and I have not seen my bootblack since December 24. As before stated, he is a temperate man, and I am convinced that at last he drank from the wrong bottle. Now I am advocating immediate legislation to the effect that all tan shoe polish be manufactured under the Food and Drug Act.

• *EMBARRASSING COURTESY*

As might be expected, our houseboy is Chinese. His courtesy is inborn. He is literally a houseboy because he has not yet reached the voting age and we treat him much as one of the family. When we dine "en famille" we invariably fill a plate from our own table and hand it to him for his consumption in the Kitchen. Sometimes he may have already had a dish of rice and fu yu, on which occasions he modestly refuses the plate.

A few nights ago we had guests. I placed a generous helping on a plate and handed it to Tao, neglecting to tell him where it was to be served. With a gracious bow and a bright smile Tao said, "No, thank you."

• *AVOID RISKS*

It was the day before Christmas and all through—no, I mean all was quiet—What I'm getting at is that I went to lunch at Fred Solari's on December 24th. I was late and it was quiet in my corner. At a near table sat a man with two empty highball glasses and one full water glass before him. As I sat down the waiter replaced the two empties with a highball. When the waiter turned to go, the gentleman said "For the third time I ask you, please take that water away. I might make a mistake."

PHOTO FORUM

Final meeting of the Photo Forum's first series at the San Francisco Museum of Art was held Monday evening, January 20 with Boyd Rakestraw, assistant director of the University of California Extension Division, the guest speaker. Subject: "Does Your Film Tell a Story?" The showing of slides and moving pictures, by invitation only, was followed with the final award for the prize-winning production.

An advanced series of the Photo Forum, consisting of eight more meetings, will start Monday evening, February 3. Photographs, color slides and moving pictures will be included in the second course, broadening the scope of the program.

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BETTER DESIGNED HOMES

THE growing recognition of the need for better design and construction in new residential housing and the protection and rehabilitation of existing residential neighborhoods, promises effective results in 1941, according to John H. Fahey, Chairman of the Federal Home Loan Bank Board.

"The year 1940 witnessed a significant development in the attitude of housing leaders," said Mr. Fahey. "Dissatisfaction with poor design, use of flimsy materials and shoddy workmanship, was stimulated during the depression, when people found the equities in their homes had been sharply reduced by depreciation. Lending institutions, whose investments were imperiled by the same evils, determined to demand higher standards in the future. In the last year they have done something about the situation.

"The result has been a steady trend toward providing more safeguards for home ownership. Architects and other technical experts are being drawn into the small home field for the first time. Progressive lending institutions are encouraging excellence of design and construction with more liberal loans and terms, and keeping away from doubtful construction. This trend has not gone nearly far enough — but there is every evidence that it will gain momentum in 1941.

"The Federal Home Loan Bank System and its 12 Regional Banks are cooperating with the American Institute of Architects and the Producers' Council, the national association of materials manufacturers, in this program. The 3,900 member institutions of the Bank System are being urged to demand the highest possible standards for the homes they finance and to evolve means of 'registering' on a merit list those which meet all the requirements for attractive design and dependable construction.

"If newly built homes meet higher standards and there is a concerted movement for the conservation and rehabilitation of existing residential neighborhoods, an increased security in American home ownership will be assured. In regard to the latter pro-

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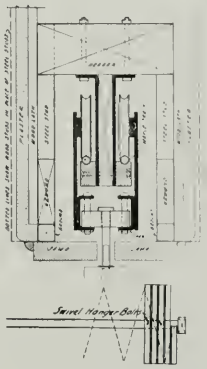

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gram, 1940 was a significant year.

"The Bank Board recently published a volume entitled 'Waverly—A Study in Neighborhood Conservation.' It told of a test program conducted in a section of the city of Baltimore to conserve property values and rehabilitate declining areas. The Waverly project was concerned principally with single-family homes; another project in the Woodlawn district in Chicago is testing the practicability of protecting and improving a district of multi-family structures.

"Both efforts have won the support of property owners and civic associations. These groups have endorsed the theory that public vigilance can halt structural decay and carry out plans to overcome other factors in obsolescence. When it is realized that essentially sound residential districts in every city are threatened by blight which can be corrected and eliminated, one is impressed by the importance of the conservation movement.

"We have grossly neglected this problem in the past. The loss of property values has mounted unnecessarily to millions of dollars every year. Of course, residential neighborhoods that are in demand for sound commercial reasons will have to give way. But it is foolish to sit idly by and witness unnecessary and unwarranted decay from blight within or the enroachment of slums from without.

"Other Government agencies than the Bank Board and its subsidiary, the Home Owners' Loan Corporation, have joined in the fight against neighborhood blight. But the most important development lies in the awakening of home owners and mortgage institutions to the possibilities of the movement. With their cooperation, valuable accomplishments are certain."

ENGINEERS' DIGEST

The Engineers' Digest is a new British monthly dealing exclusively with advances in applied engineering as abstracted from periodicals in foreign countries. Since it has become increasingly difficult to obtain periodicals from European countries, this pamphlet doubtless will be welcomed

WOMEN go into raptures over this new Wesix "Perfect Thirty-Six" electric bathroom heater. Its instant, head-to-foot heat, they exclaim, "is simply marvelous!" You will like it because it *fits perfectly into 42-inch wainscots.* For details write Dept. 206, Wesix Electric Heater Co., 390-1st St., San Francisco.

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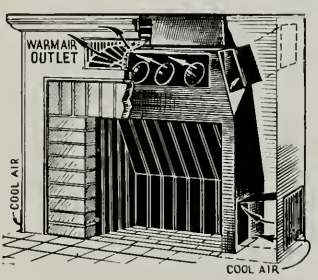
Articles abstracted are particularly applicable to the work of the defense program. Copies may be ordered from the Chemical Publishing Co., Inc., 148 Lafayette Street, New York, N. Y.

FIREPLACE CIRCULATOR

Evidence of the Superior Fireplace Company of Los Angeles constant striving to improve the utility, beauty and long life of their product is shown by the new model illustrated here.



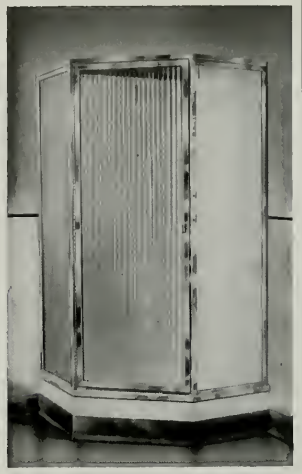
In addition to its many other desired features, the new model has die-pressed ribs to reinforce the boiler-plate firebox. This helps prevent warping due to expansion and contraction of metal sometimes experienced in the ordinary type fireplace circulator having flat metal surfaces.

SAFETY CONTEST WINNERS

Six months of no lost-time accidents led to awarding of certificates to two winners in the safety contest of the Northern California Section of the American Ceramic Society, at the recent annual meeting.

C. L. Barr, Superintendent of Safety Engineering State Compensation Fund, presented certificates to W. A. Hislop, California Art Tile Corporation, and A. C. Myers, Myers Ceramic Products Company. The names of these winners were ordered engraved on the safety trophy and they will share possession of it during the forthcoming year.

C. W. Kraft, Kraftile Company, presided as chairman of the section. Officers for the new year were elected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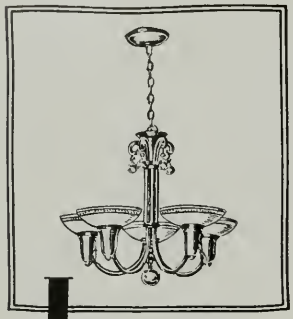

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EDW. LANGLEY SCHOLARSHIPS

Edward Langley scholarships, open to architects, draftsmen, and teachers and students of architecture in the United States and Canada, will be awarded in 1941 by the American Institute of Architects, it is announced by Edwin Bergstrom, president of the Institute. Proposals will be received at the national headquarters of the Institute, 1741 New York Avenue, Washington, D. C., until March 1.

Given annually for advanced work in architecture, study, travel, or research, the scholarships carry stipends determined in accordance with the need and purpose of the candidate and the funds that are available.

"Only a very limited number of awards can be made in any year, so, to avoid unnecessary disappointment, a candidate should not be proposed unless his qualifications are outstanding and it is evident that the profession will be benefited by an award to him," the announcement says.

Architects and architectural draftsmen may be proposed as candidates for scholarships by architects residing in the same country. The faculty or head of any architectural school in the United States or Canada whose standing is satisfactory to the committee may propose any teacher of the school, any student about to be graduated from the school or any graduate student engaged in postgraduate work in the school or in travel.

While awards to undergraduates are precluded, grants may be made to architectural draftsmen who desire to do undergraduate work or take special courses in architectural schools. Any architectural draftsman employed by an architect may be proposed as a candidate, whether he is engaged in drafting, writing specifications, supervising, or acting as executive, and whether or not he is a college graduate.

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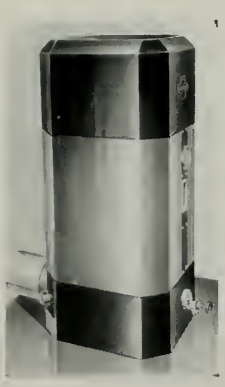
Character, ability, purpose, and need will be considered by the committee in making the awards. Competitive examinations will not be used as a method of selection, but a proposed candidate may be requested to submit examples of his work and to appear before a representative of the committee. An award may be made in a succeeding year to a holder of a scholarship. The 1941 awards will be announced about June 1.

COMPACT HEATER UNIT

The S. T. Johnson Company, pioneer builder of oil burning equipment in California, has put on the market a new low priced boiler unit called "Econolux," which adapts the highly efficient marine boiler principle to the modern need for a completely automatic, small, but large capacity steam, hot water, vapor, or hot air heater.



"Econolux" comes in nine sizes, each a complete "package unit" with capacities suitable for heating anything from the modest home to the finest mansion or from 200 square feet up to 2000 square feet of steam radiation. The largest sizes need only 30½ inches square of floor space, and the small sizes 20 inches on a side. The overall heights range from 41 inches to 79 inches. Due to top firing unusually low water levels are maintained, starting at 18" up to 41". The two small sizes are also designed for high pressure steam service (100# working pressure).

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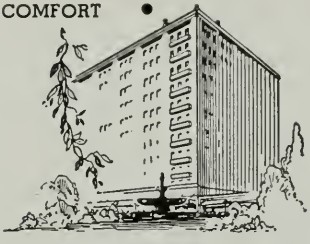

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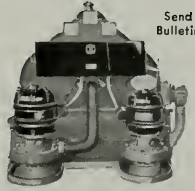

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HEATING ENGINEERS TO MEET

A well-balanced program of business and entertainment has been prepared for the 47th annual meeting of the American Society of Heating and Ventilating Engineers, January 27 to 29, at the Hotel Muehlebach, Kansas City, Mo.

The first technical session will be called to order at 2:00 p.m., Monday, and 13 technical papers will be presented and discussed. The reports of society officers and various committees will be submitted and the extent of the research work carried on in 1940 will be outlined by A. E. Stacey, Jr., New York, chairman of the Committee on Research. His report will show that the completion of nine laboratory projects and the initiation of eight new investigations at the ASHVE Research Laboratory and in cooperative institutions has been accomplished by the Committee on Research during the past year.

Completed laboratory investigations have dealt with the effect of radiation on the sensation of warmth of an occupant in an enclosed space, and reactions of individuals to environment having low relative humidities. Additional studies have also developed data for establishing heat gain through windows with various types of appurtenances; frictional flow of water in large size pipes; and, comparative performance of air filters utilizing various methods of test. Among the new investigations which have been outlined and initiated are those dealing with noise transmission in ducts; heat losses from basements; air flow in duct transitions, and studies to establish basic design factors in rating heating cooling operations.

INFERNO BOUND

A Denver man was seriously ill, and when he recovered from the anaesthetic after an operation he found himself lying in bed in a darkened room with his wife seated in a chair nearby. He asked why the blinds had been lowered.

His wife replied: "There's a building on fire across the street, and I thought that if you saw the blaze through the window you would think the operation had not been successful."—Exchange.

Cathedral Tapered Mission Tile was Mr. Neff's choice for the roof of the Doheny Library near Camarillo, California

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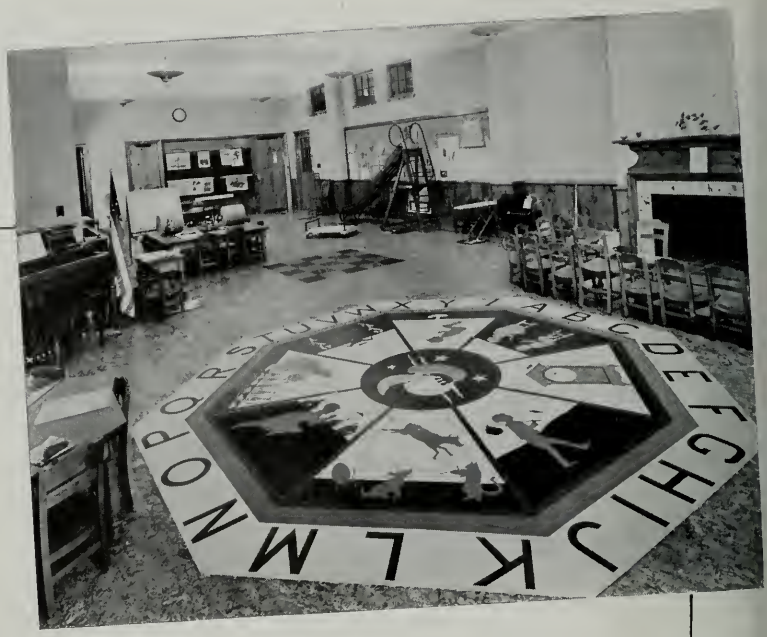
Personal-ized Floor of Nairn Linoleum in the kindergarten of the Barlow School, Plainfield, N. J., designed to create child interest.*



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RUNNING FIRE

By MARK DANIELS

• *THE METROPOLITAN'S PROJECT*

At a meeting of a society of San Francisco architects the subject of the Metropolitan Insurance Company's housing project in the Merced Lake district was the major topic of discussion. It seems incredible, yet it came out that there are people in this city who contend that any project larger than a gas station done in the City of San Francisco must employ a San Francisco architect. Of course, nothing is said about San Francisco architects doing work in Salt Lake City or elsewhere outside California.

But that is not the major absurdity of this insular attitude. The most ridiculous phase is the thought of combating the introduction of outside talent. The old theory that only local architects may crow on their own dung heap has long been abandoned by progressive cities, with the apparent exception of San Francisco.

Not only the architects but the entire population should be proud that the Metropolitan Company chose San Francisco as the location for one of their mighty, modern projects; that they have given the job to an architect nationally famous for his work, who has already done some of the finest buildings in the city; and that, at last, San Francisco can take her place among those leading cities who no longer give their citizens only the alternative of frame fire traps or mansions. Happily the Northern section of the State Association of California Architects passed a resolution to that effect at their last meeting.

• *REVERSE ENGLISH*

Things are happening in this day of paradoxes, contradictions and reverse english that may be encouraging to architects.

For the past fifty years there has been a growing tendency, on the part of the anything-but growing number of employers of architects, to move into their beautiful new premises and, when they are sure everything is all right, to kick the architect and his bill down the front stairs. I manfully refrain from discussing the right or wrong of this pastime, despite its popularity, but if I were not writing this for publication I would not hesitate to say that the architects have brought it upon themselves. However I did not start to write on ethics for architects but to give them a little encouragement by way of implication.

We architects have all given many a client a free ride and been stood up at the end of it. A few weeks ago I read of a hitch hiker who thumbed his way into the rear seat of a passing car only to be driven up an alley and robbed by the autoist. Perhaps the driver was an architect.

• *THE LITTLE MAN*

Shaking raindrops from his coat, The Little Man darted into the Maiden Lane entrance, collided with a large man going out and caromed to the bar where he recovered his balance by grabbing my old-fashion which, when down, completely restored his aplomb. "This mad dashing about like a bee in a bottle," he said, "is contrary to all the laws of God and gravity. Admonitions are of no avail. For 400 years we have heard 'Haste maketh waste,' 'Marry in haste, repent at leisure,' 'Look before you leap,' and still people bump into one another. Nothing is accomplished in a hurry. I am not the first one to say 'Rome was not built in a day,' although I am the last one to believe it. Minerva sprang from the brain of Jove, full panoplied for war, but no one knows the length of the period of gestation and many another brain child is still unborn. In Alabama boys are often nursed at the breast until they are fourteen, which keeps alive in some a waning faith in Alabama. Speed may be the essence of the contract but all great things are accomplished through deliberate action. Slowly Japan absorbed Korea and Manchukuo while Russia took Siberia steppe by steppe." Al tried to slide an old fashion within my reach but he was too slow.

• *TRACERS*

In my youth, a time that glows and fades with moods like an oculist's test chart, we played a game called hare and hounds. The one playing the part of the hare would drop small pieces of paper as he ran along streets, alleys, lanes and through parks and gardens. These bits of paper were evidence to the pursuing hounds that they were on the trail. They were evidence of the whereabouts of the hare.

With the reports of the ever increasing number of planes that fly from their bases and get lost, the search might be shortened and simplified by passing a law that pilots must toss out a bundle of colored paper every five minutes.

• *IRONY*

Thomas Chatterton, a great poet of England and author of the famous martial lyric, "Ode to Liberty," died in a garret and was buried in the Shoe Lane Workhouse burying ground. Wolfgang Anadeus Mozart was carried alone to his last long home in a pauper's grave in Vienna. But things have changed these years. Not long ago an officer in the United States Army was thrown out of a night club on charges of drunken and disorderly conduct. He died of the treatment and was buried in Arlington Cemetery, Washington, D.C.

• *MEN WITH A PAST*

It ill becomes any man who has lived in California as long as I have to decry the use of strong wines and whiskies, nor do I do so. But it seems to me these meetings of architects and artists do not run along as merrily as they did 30 years ago and I attribute the change to the substitution of whiskeys and wines for the good old beer of former days. Perhaps the downfall of beer at such gatherings is the resulting tendency to sing "Sweet Adeline," which is enough to justify the change of any custom. And, of course, I like an old fashion.

(Turn to Page 70)

ARCHITECT AND ENGINEER

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NEXT MONTH

¶Probably no one architect in Northern California has designed more "modern" houses in recent years than William W. Wurster. One of the first architects in the San Francisco Bay Region to accept the functional school, Wurster has dared to do things his more conservative professional brothers have hesitated to attempt, with the result that today he is probably one of the best known architects in the country. ¶Wurster houses are talked about from Coast to Coast, due largely to the wide and generous publicity given his work by leading periodicals, architectural and otherwise. ¶With full appreciation, ARCHITECT AND ENGINEER will devote the main content of its plate and text pages to Mr. Wurster's work next month. So do not miss this number.

Bathrooms whose owners will still bless their architects 20 years from now!

Owners are forever proud of bathrooms walled in Master Kraftile 6 x 9's.

Smartly modern in size, they're three times as large as conventional 4¼ x 4¼'s. And Master Kraftiles are triple-glazed, acidproof, steamproof, waterproof, fireproof. Easy to keep clean. Never need refinishing.

That's why, when you specify *and make sure you get* Master Kraftile 6 x 9's in the bathrooms, you make a friend *for life* of your client.

• *William Edward Schirmer, Arch.*

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write or phone our Structural Service Department at Niles, California.

MASTER KRAFTILE 6x9's

MODERN — BUT NOT FREAKISH • JEWEL-LIKE PERMANENCE

HAWS FOUNTAINS AGAIN

Note the HAWS FOUNTAIN (model No. 7A) at the lower left of this picture which shows the main class room corridor of the El Segundo School, El Segundo, California. Samuel E. Lunden, architect.

The picture below is a general view of El Segundo School, reputed one of the outstanding school buildings in Southern California.

Model No. 7A HAWS DRINKING FOUNTAIN represents the last word in sanitary drinking fountains for schools and public buildings . . . . a fixture of beautiful design that meets universal approval of leading architects.

HAWS DRINKING FAUCET COMPANY

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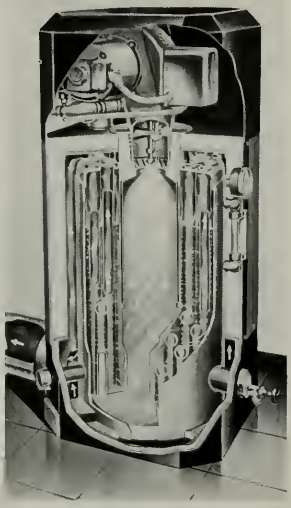

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WRIGHT PLANS COMMUNITY CHURCH

"If I did supply detailed specifications on this new type of modern architecture, I would have to supply engineers and architects for your department to understand them," countered Frank Lloyd Wright when faced with Kansas City Building Commissioner F. L. Lang's refusal to issue a permit to build a community church without more detailed plans and specifications (according to "Time").

The cantilever construction proposed, as well as other features, were insufficiently lucid to satisfy the Department of Buildings. However, Architect Wright agreed to employ Engineer Irwin Pfuhl to make revised plans of the church's foundations, and Wright agreed to be more specific about his specifications.

This building is not ecclesiastical architecture as ordinarily understood. It is revolutionary in design, as might be expected from Mr. Wright who calls it "the first completely functional church." There are three decks of parking space for the congregation's cars, since Wright holds "it is immoral and unethical to build a structure without providing for the traffic it will attract." In lieu of a tower with steeple, the church will have pillars of light shot heavenward by interweaving floodlights from a copper crown on the roof. Walls as here proposed have never before been built. There are steel stanchions interwoven with wire lath on paper on which is sprayed gunite, the entire wall thickness being 2¾ inches. The walls are unbroken by any windows.

The building will be heated by radiant heat, with pipes embedded in the floor construction, eliminating all radiators and convectors. It will be air-conditioned, summer and winter. The auditorium will be provided with a movie screen, room for a one-hundred piece orchestra in front of the chancel, a chapel, nine Sunday-school classrooms, a large "rumpus" room for games, a banquet hall, and open-air terraces. Estimated cost is only $175,000. By comparison a traditional church would cost at least $300,000, says Dr. Jenkins, pastor.

—Bulletin, Illinois Society of Architects.

MACKINAC STRAITS SUSPENSION BRIDGE

The Mackinac Straits Bridge Authority, profiting by the collapse of the Tacoma Narrows span in the state of Washington, is taking every precaution to perfect and check the design of its proposed suspension bridge over the Straits of Mackinac in Michigan. Slenderness ratios for both width to length and depth of truss are being determined after subjecting models to dynamic as well as static loadings, and other information obtained through the use of a wind tunnel. The studies contemplate use of trusses instead of plate girders for stiffening members, and an open grid floor rather than the usual solid slab. The open grid has the advantage of reducing the uplift from pocketing winds.

Mackinac Bridge will consist of two suspension bridges placed tandem, with a common central anchorage as used on the San Francisco-Oakland Bridge.

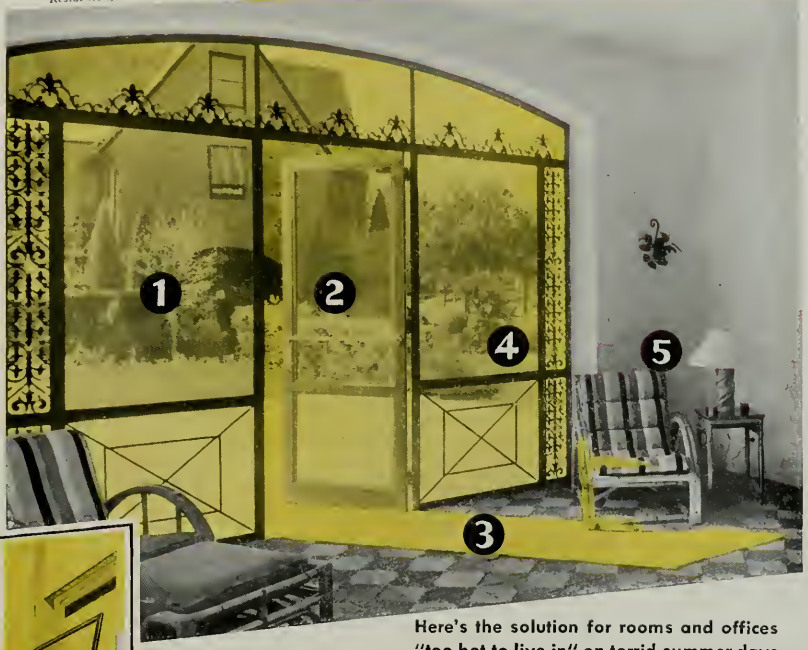
Of Course—

you don't air-condition a porch

BUT THIS PHOTO DEMONSTRATES HOW KOOLSHADE* SUN SCREEN KEEPS ROOMS ASTONISHINGLY COOL!

Look twice at the picture shown below! It is a most unusual photograph—entirely unretouched—that gives you a perfect visual demonstration of KOOLSHADE Sun Screen. See how the strong, hot sun pours through the open doorway . . . while the KOOLSHADE Screen completely stops the direct sun heat, allowing only cool, glareless light to enter!

Residence of W. H. Wildes, Dallas . . . Thomson & Lanum, Architects



NOTICE THESE FIVE SURPRISING POINTS:

1. This KOOLSHADE Screen is completely stopping the full blast of the sun! Hard to believe? Yes, but—
2. Here the door was left wide open—
3. So you can see the force of the sun that streams in!
4. The view is beautifully clear—with full ventilation, full insect protection and smart appearance.
5. Sun Glare is killed, while a flood of cool diffused light enters.

KOOLSHADE STOPS THE SUN HEAT *OUTSIDE* OF THE WINDOW GLASS . . . REDUCES SOLAR LOAD AS MUCH AS 80% TO 85%
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SINKING OF THE RAWALPINDI, BY EDWARD HAGEDORN

NEWS AND COMMENT ON ART

GRAPHIC ARTS ANNUAL

FOR the Drawings and Prints Annual of the San Francisco Art Association (closing February 18 at the San Francisco Museum of Art) the jury of selection chose 184 out of 1058 works with no evidence of prejudice against any particular kind of art or technical method. Eighty-six of the works are by out-of-state artists—which makes an exhibition representative of the whole country. Men like John Carroll, Nils Strom and others from the East may have crowded out some of the local contenders, but credit is all the greater to the many whose work stood up to the competition.

This year there are naturally a good many efforts to tie subjects and titles to present-day headlines. Some fall short because the significance is all in the title. In Memoriam, Chartres Cathedral by John Taylor Arms, for instance, is a conventional view of the cathedral, no doubt drawn long before the present war. Its afterthought title seems false in claiming a significance which, if you acknowledge it at all, derives from an external event and not from any quality of the work. The same might be said of Iron For Japan by Glenn Wessels. It's difficult to see how this dramatically-handled dock scene conveys any of the indignation, irony or despair which the title today is expected to arouse. Certainly a timely title that doesn't pan out is A Fifth Columnist by Gilbert Rocke, which to careful examination yields nothing but the image of a lumbering nude.

Chief objection to this headline title practice is that it sends the mind out of the picture to the field of practical thought and action instead of keeping it within the dramatic play of the picture.

A conscientious working of the material can err in this same department. What Now? by Ralph Fabri depicts the march of humanity past all the chief periods of history to the unknown portal of the present. Although all this is moving, the elaborate symbols, like a Winsor McKay editorial illustration, make you think of anything except what is before your eyes.

On the other hand two abstract works seem really effective as reflections of these times. Their titles only detonate a charge which is genuinely contained within them. Aggression by Leon Miller shows vague but terrifying gestures of aggression. And Where? by George Harris does in fact suggest helpless indecision. Here is the sort of graphic language which Picasso used in his Guernica—a symbolism which though it is recognized only subconsciously arouses the most vehement reaction. By contrast another abstract print, Air Raid No. 4 by Azio Martinelli, which treats its theme in a blandly decorative manner, seems quite insensitive.

But most of the prints and drawings stay within the field of more ordinary experience and observation. These are intimate mediums, and some of the finest things are properly small in scope but make a complete world. Haircut at Home, a scratch board drawing by Zena Kavin, is such a one, and also Tired Hitch Hiker by Julius Bloch. Wittiest thing in the show is Men Playing With Machines, a composition of juke boxes and pin games by James McConnell. There are some fine things in color, especially two lithographs, Family Group by Eleanor Coen, and Solomon Cucumber by Misch Kohn. A few of the works show extraordinary technical virtuosity, as the wood engraving Gathering Summer's Bounty by E. Hubert Deines, which shimmers with a kind of ecstasy in its myriad rhythmic lines. And there are examples of magnificent draftsmanship, as John Carroll's Nude, which is pure spirit, Ralph Stackpole's drawing of a Chinese girl, Jack Wilkinson's kinesthetic Tumbling Troupe.

An artist who changes the intimate quality of etching to a monumental form is Edward Hagedorn. His themes are felt so intensely, his plates gashed so deep and inked so thick, that the idea of etching as mild and delicate is totally denied. For his Sinking of the Rawalpindi in this show he was awarded an Artist Fund Prize. Bernard Zakheim's Ship's Bowels, which shared this prize, one might say also has more guts to it than is commonly seen in a graphic show. The San Francisco Art Association Purchase Prizes went to Denny E. Winters of Los Angeles and Meyer Wolfe of New York.

In the prints field there are many people who practise almost no other art. They possess technical dexterity and often ideas of charm, but seldom are their resources sufficient to let them seize an idea and express it boldly, consistently and with a broad sense of values as might an artist of wider scope. They form a valuable group, but it is probably because most of the exhibitors in this annual are artists first and printmakers and draftsmen only secondarily that the show has so many high spots.

PAINTINGS OF FRANCE

THE great exhibition of the Paintings of France Since the French Revolution at the De Young Museum is by no means over. Seventy-eight of the works remain on view, including most of the contemporary things and some of the finest 19th Century items. Now that there is a less spectacular array of masterpieces you can appreciate the individual works more fully than before.

A change of hanging breaks the spell that a great exhibition seen as a unit is likely to cast and lets you see things in a new and separate light.

The Monticelli Scene from Don Quixote, which you may have been swept past during the larger showing, should make clear now why such an artist as Van Gogh admired this painter's work. You will find the pearly Nymph of the Seine by Corot pearlier than ever and his strangely flattened Woman with Toque. Most of the Renoirs remain, including his glorious Reclining Woman. You can enjoy again the absolute perfection of Degas' After the Bath.

A new exhibition of French Engravings of the 19th and 20th Centuries rounds out the De Young show very nicely. Prints are here by many of the painters in the other room. Also showing are Eighteenth Century Meissen—the Earliest European Porcelain, and Creative Expressions in Art by Children from the 4th through the 8th grades, San Francisco Public Schools.

At the Legion of Honor Museum in Lincoln Park the paintings of Luigi Lucioni may be seen through February and the Miniature Rooms by Mrs. James Ward Thorne from February 22 through April 22.

GEORGES ROUAULT

THE Retrospective Loan Exhibition of Paintings by Georges Rouault (February 19 to March 24) is the major show of the season at the San Francisco Museum of Art. Largest representation of his work so far assembled, this exhibition was organized as a cooperative venture by the Boston Institute of Modern Art, the Phillips Memorial Gallery in Washington, D.C., and the San Francisco Museum of Art. It contains some 75 oils, gouaches, watercolors and tapestries, and added to it is a gallery of Rouault's etchings, wood engravings and lithographs.

Usually grouped with Picasso and Matisse as one of the three dominant painters of today, Rouault is perhaps the most difficult of the lot to understand. He is a painter of medieval, almost fanatical, intensity. This exhibition tries to make matters easier with a study gallery of derivations and parallel expressions. Altogether the works will probably give you the most intense esthetic experience you are likely ever to get.

Other exhibitions at the San Francisco Museum of Art are: Caricatures by Sotomayor, February 21 to March 10; Watercolors by John Haley, through February 23; Drawings by Franz Baum, through February 24; Paintings and Prints by Mallette Dean, February 24 to March 9; Watercolors by Robert Bach, February 25 to March 16; and works by Alexander Nepote, March 10 to 23.

CHARLES LINDSTROM.

THE GREAT LITTLE ROOM

ONE of the unique architectural treasures of the world was thrown open to the public at the Metropolitan Museum in N. Y. January 22. The authorities of the Museum claim that seldom in its history has the Museum offered an acquisition of greater significance. It consists of a small wainscoted study from the Palace of Federigo da Montefeltro, Duke of Urbino, a 15th century Italian prince renowned as a patron of the arts and the sciences. Despite its small size—it is about 17 feet by 15 feet, and irregular in shape—literally hundreds and hundreds of thousands of individual tiny pieces of wood were used in its making, for the whole wainscoting is made up of what might be called wood mosaic, a technique often termed marquetry or intarsia. The purpose of this wall decoration was to provide the room with the effect of adequate furnishings, for it is so small that it would scarcely admit more than a table and perhaps one or two chairs as actual, useful furniture. With the décor of the wainscoting, however, it is completely equipped. By means of the marquetry twelve cupboards are represented around the walls. These are separated by fluted pilasters. Beneath the cupboards in the same ingenious intarsia technique there is a series of benches with ornate baluster supports; by showing some of these raised, others dropped in place, the realistic quality of the elements of the design is accented.

The latticed doors of the cupboards are open at various angles so that their indicated contents are visible. Included in the fascinating display of objects thus revealed are writing equipment, boxes, candlesticks wax tapers, an hourglass, a mirror, a brush an albarello, or jug, and, perhaps most ingeniously wrought of all, a bird in a cage. Looking further we see musical instruments, scientific paraphernalia, and quantities of bound books, doubtless reproducing volumes in the Duke's famous collection of manuscripts.

Throughout the room the wainscot decoration brilliantly approximates the effect of three-dimensional reality through the use of perspective and shadows. The room must be seen to be appreciated, and thereafter no one can doubt that it is one of the outstanding records of the Renaissance and of Italian humanism now extant.

ZIEGFELD GIRL COMPETITION

Cash prizes totalling $1,000 will be awarded for the best drawings or paintings symbolizing the "Ziegfeld Girl of 1941," in a national contest conducted by the Art Students League of New York. The contest is open to all artists or art students in the United States.

A group of America's most distinguished illustrators are co-operating in the contest. As a guide and inspiration to entrants in the competition, Neysa McMein, McClelland Barclay, James Montgomery Flagg, Varga, Gilbert Bundy, and John LaGatta are preparing their own individual conception of America's most beautiful showgirl.

(Turn to Page 76)

VANDERBILT CLINIC, BY MEYER WOLFE

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of the
PUDDING

Daily occupancy is the relentless test of a building's efficiency. Under this test the weaknesses in planning stand revealed.

Nowhere is inefficiency so quickly apparent and so constantly irritating as in inadequate electrical wiring.

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The secret to this eye-saving light is its special pigment-treated reflector. This reflector or "artificial sky" balances the irritating, heavy, blue light common to ordinary fluorescent lighting and produces a neutral colorless light—makes eye work easier and quicker.

THE "ARTIFICIAL SKY"

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The "Engineers Fluorescent," manufactured by the Frederick Post Company of Chicago, gives cool illumination, permits working close to the light source without irritating heat. For a given intensity of light it produces only one fifth as much heat as an incandescent light that gives an equal volume of illumination.

Attractively finished in brown Matelasse with silver trim on the shade the "Engineers Fluorescent" will add beauty to the drafting room.

Quick, positive adjustments set the swivel arm at any position from the table top to 24". Shade is adjustable in a horizontal arc 360 degrees and in a vertical arc 180 degrees.

COCA COLA PLANT

The Coca Cola Bottling Company will enlarge its plant at Eleventh and Mission Streets, San Francisco, spending $150,000 on improvements from plans by the company's architect, Jesse M. Shelton of Atlanta, Georgia.

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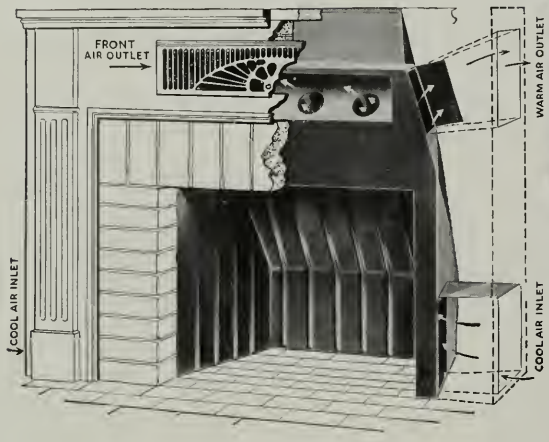

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Here's a typical problem often faced by architects: A small house, costing $7,000. Small bathroom space—only 7 x 8 ft. What can be done to provide maximum bathroom convenience and charm—low cost?

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For 1941, Crane Co. is introducing matched sets to give architects greater scope in planning bathrooms for various sizes of space and various types of homes. Watch for other announcements. Visit the Crane Display Room to see and judge Crane Quality for yourself!

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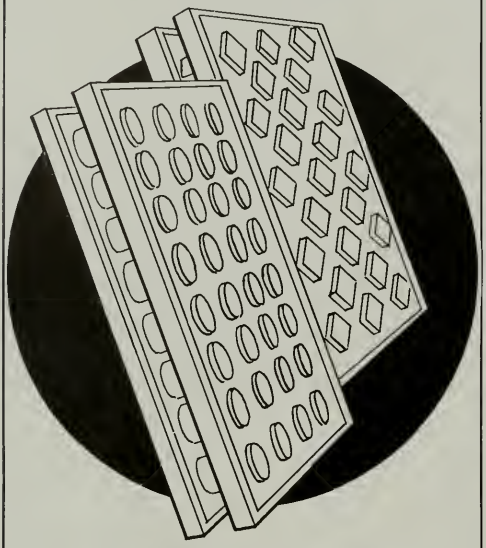

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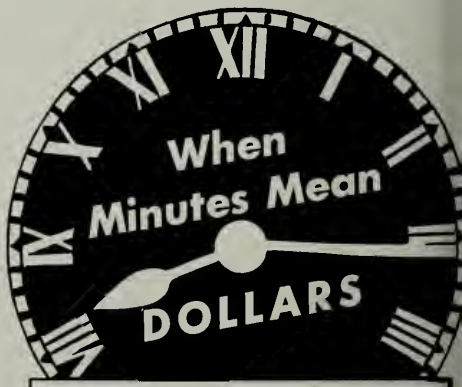

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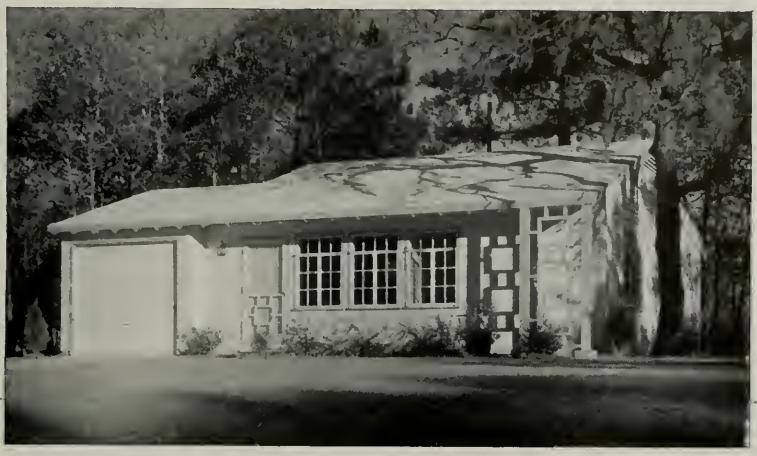
DESIGN FOR HAPPINESS HOMES—



Architect,
B. W. Crain, Jr.,
Houston, Texas.

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● Homes "Designed for Happiness"—with glass, are meeting the demand of American home owners for better, more livable homes. And they're giving the architect an opportunity to profitably engage in small home designing. Design for Happiness homes are not just scattered single houses. Almost always, they are built in multiple units of from 10 to 300 or more—giving the architect a worthy incentive to profitably provide these houses with good design and sound construction.

In all of these Design for Happiness homes glass is working miracles... dramatic examples of the results architects have achieved by the deft and generous use of modern glass. Wide windows, built-in mirrors, decorative glass partitions lend their beauty and usefulness to these homes... make them brighter, gayer, more spacious—homes that invite better living.

"Design for Happiness" is more than just a house. It is a nation-wide building program devoted to better and lower cost homes for the home owner of America. It's getting recognition from an appreciative public too—from coast to coast, Design for Happiness homes are springing up. Already about 11,000 of these homes designed by many architects and erected by local builders, are already scheduled for construction in every section of the country. More are being planned every day. For full information about these new homes "Designed for Happiness"—with glass, write Libbey-Owens-Ford Glass Company, Toledo, Ohio.

● A built-in plate glass mirror in the living room forms a focal point of interest—pushes the wall back—increases the apparent size of the room. For what they add in beauty and utility, the cost of mirrors is small.

● This disappearing dressing table and mirror saves space in the small bedroom. Both the mirror and the table are attached to the back of the closet door.

● The small decorative glass partition as well as the cupboard doors are glazed with Louvrex glass—adding a smart, attractive note to these modern homes.

● A Powder Mirror—small mirrors, conveniently placed in kitchen or hall, save steps and time. Such features make houses more livable, more salable.

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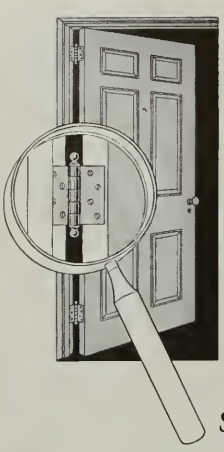

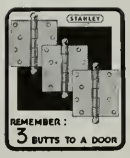

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Photos taken from
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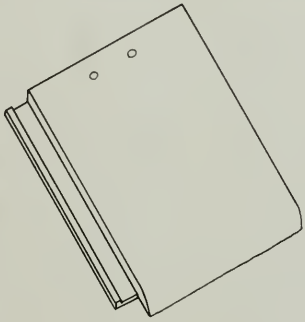

PERTINENT FACTS

- ☆ Name: SUNNYDALE HOUSING PROJECT, San Francisco
- ☆ Architects: ALBERT ROLLER and ROLAND STRINGHAM, S. F.
- ☆ General contractors: BARRETT & HILP, San Francisco
- ☆ Roofing Contractor: J.W. BENDER ROOFING & PAVING CO.
- ☆ Tile: INTERLOCKING SHINGLE TILE
- ☆ Number of Buildings: 90
- ☆ Number of squares of Tile: 3550

☆

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RESIDENCE OF CHARLES BAKER, SLEEPY HOLLOW ACRES, FAIRFAX, CALIFORNIA

FRANCIS E. LLOYD, ARCHITECT

Photo by Phillip Fein

VIEW FROM GARAGE DRIVEWAY

A HILLSIDE HOUSE

in "Marvelous Marin"

THE problems of accessibility, plenty of sunshine and convenient garage accommodations, have been successfully worked out by the architect in his design of the Charles Baker residence in Sleepy Hollow Acres, Fairfax, California. Located in the Marin Hills, twenty miles northeast of San Francisco, the house commands a sweeping view of the valley below and Mt. Tamalpais to the south.

The steep hillside plot is not an unusual problem for the California architect to encounter although there are frequently certain requirements of the owner that are not always easily provided. As already stated, the Baker house problems included provision for car shelter roof and a broad sun deck off the large living room. The natural privacy afforded by the site permitted the full exposure to sun and view (coincidental in this case) of all principal rooms on the approach side. While the entrance drive and court serve as access for both family and service, an effective separation is attained by a centrally located stairway which leads to the front entrance on the deck above.

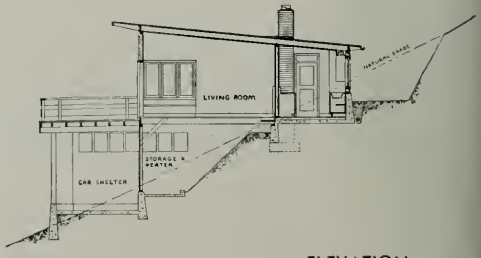
Grading on the uphill side provides a sheltered outdoor dining terrace, and the landscaping along the contour is designed to reveal a colorful vista parallel to the house and at the same time dispel the restriction of a hillside cut.

RESIDENCE OF CHARLES BAKER, FAIRFAX, CALIFORNIA

VIEW OF HOUSE FROM HILLS

Note winding road and gradual grade to residence site

PLAN



ELEVATION

Garden Front . . .
A beautiful setting mid spreading oaks . . note spacious view porch at left of picture

An impressive interior with a pronounced modern feeling

CONSTRUCTION OUTLINE
Charles Baker Residence, Fairfax, California

FOUNDATIONS
- Concrete (transverse tie beams on bedroom end)

STRUCTURE
- Exterior walls: wood studs, sheathing, paper, Redwood Anzac siding; portions stucco over wire mesh
- Roof: wood rafters and sheathing; 3-ply built up covering
- Gutters: redwood

SHEET METAL WORK
- Flashings and leaders: #16 galvanized iron

INSULATION
- Ceilings: Celotex insulating lath

WINDOWS
- Casement sash: sugar pine; Windor operators
- Glass: single strength "B" quality
- Screens: #16 mesh bronze cloth

FLOORS
- 1/4" plywood under linoleum
- 3/8" white oak in bedrooms only

FLOOR COVERING
- Armstrong's Linoleum

PAINTING
- Trim: "Dutch Boy" white lead; Bass-Heuter mixed paint; W. P. Fuller & Co. enamel
- Redwood siding: Cabot's creosote stain

ELECTRICAL INSTALLATION
- Knob and tube system, concealed
- Switches: flush tumbler type

KITCHEN EQUIPMENT
- Ebco sink
- Stove: Gaffers-Satler
- Refrigerator: General Electric
- Bendix washer

PLUMBING
- Supply: galvanized steel
- Soil: cast iron
- Septic Tank: "San-equip" steel tank

HEATING
- Gas-fired warm air system, with blower
- Furnace: "Sunbeam"
- Hot water heater: "Day and Night"

The plot curvature has been acknowledged in plan with pleasing results on the interior as well as exterior. The oblique angle of the hall in relation to the living room, the French doors opening to the dining terrace and garden, make an interesting gallery out of the necessarily long circulation area. Its length, however, has been moderated by being partly absorbed into the dining space. Coat closet, sideboard and convenient storage space have been effectively combined in a single unit of casework to screen the entry from the dining room.

The slope allowed a generous storage and heater room above the driveway level, with a full height door opening off the first platform of the entrance stairs. Completed in 1939 the cost of the improvements was approximately 37 cents per cubic foot.

EMERGENCY MILITARY STRUCTURES

by EARL MINDERMAN

AS this nation girds itself for total defense, we see training camps being built, army posts being expanded, new armament plants being erected and other heavy construction work in progress. But what about the military structures that would have to be hastily put together if this nation had to put an army in the field to fight? In other words, what about the construction problems of the army if war actually came to our shores?

Military construction needs in the theater of war are radically different from those of peacetime. Months or even years may be devoted to planning peacetime construction, but when war strikes with lightning-like suddenness, time does not permit such lengthy planning.

The army must have adequate structures in the center of operations—wherever it may be—and have them quickly. The only time for planning such buildings is in peacetime when emergency conditions do not exist. These military structures which have to be so quickly built range from simple barracks or warehouses to vast, complex ordnance repair shops, including all the structural and mechanical utilities that are necessary for the housing, treatment and movement of men and materials.

Prior to 1938 lack of funds hampered the army's construction engineers in this vital planning for defense. That which could be done was accomplished by the design personnel of the Construction Section of the Corps of Enginers at such times as the regular work of the office left periods available for this purpose.

In the fall of 1938, the Army initiated a WPA project to perfect plans for wartime military structures, and since that time some 200 individuals, many of them highly trained technicians, engineers, architects and draftsmen, have been employed in this phase of defense work.

Conservation of time is of primary importance in construction in the theater of war. Time comes before either convenience or quality. All structures of this nature are temporary and many of them are emergency. The very nature of war operations makes simplicity an essential for a number of reasons.

(Turn to Page 47)

SUNNYDALE

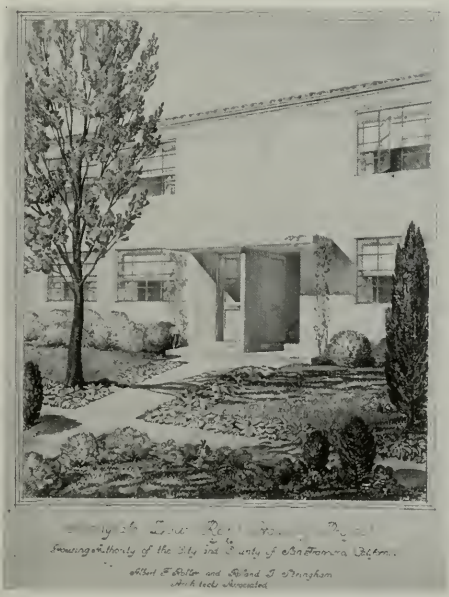
A MAJOR HOUSING PROJECT

by Arthur Eaton

BIGGEST home builder in San Francisco is the San Francisco Housing Authority under the leadership of Albert J. Evers, Secretary-Director. The job involves the health and happiness of more than 3,000 families of limited means, for whom eleven housing projects are in the making.

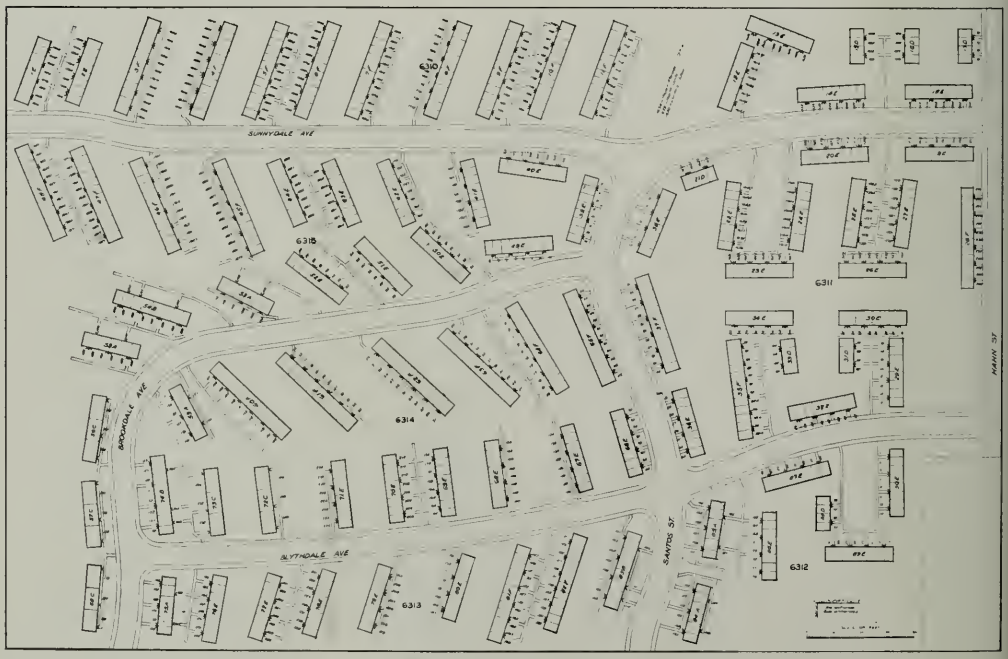
To be located in all sections of San Francisco, three of the projects are either completed or almost ready for occupancy. Eight more will be under way before the end of April. All will be occupied by 1942 to 1943.

To many of the uninitiated, the words, "Housing Authority" bring to mind any one of several agencies—and most people confuse the local municipal agency with the United States Housing Authority, and this in turn, with FHA, and some lump them in one glorious "government interference in private business."



PANORAMIC VIEW OF SNNNYDALE LOW RENT HOUSING PROJECT, VISITACION VALLEY, SAN FRANCISCO

The circular roofed structure in the center background is the County Live Stock Pavilion (no part of the project)



THE LAYOUT OR PLOT PLAN

Within the 48 acres of the project one immediately senses the "relatedness" of homes to gardens, parking areas, playgrounds, well planned streets, and social possibilities — in brief, one obtains the feeling that here at last is a **planned** community. The Administration building will include a health center, nursery school, craft rooms and a stage and equipment for theatricals—in short a full community life.

To get the maximum value for the lowest cost, architects departed from traditional building practices in laying out the terrace-like row houses. Obviously it would have been expensive to do the grading if already suitable topographical lines of the hills had not been followed. Placement of the buildings does not cut across the contours, but follow its lines. This makes it possible in the finished buildings for a family to step from their front and rear doors into their private level gardens or walks.

One problem was to have streets laid out so the grades would not be too steep. Consequently, the roads have been built to cut cross the contours at angles. Houses fan out on both sides of the road in level lines. When the grades were too great, "step" dwellings were designed, with some of the rooms on the lower floors, and with the top entrances necessarily serving as both front and rear door. In some instances, when the hills were steepest, homes are built into the line of the grade—and are longer, facing entirely on one side.

In following the contours, it was found advisable to run most of the buildings north and south to obtain the great advantages of ample morning and afternoon sunshine. This orientation was done in harmony with the overall plan which included division of the project into six super blocks.

Construction Progress. From top down: the site; lumber and foundation work; forms and concrete pouring; ready for exterior finish.

The United States Housing Authority is the Federal agency charged with carrying out the low-rent public housing program. It loans money to local municipal Housing Authorities who actually build and manage housing projects. The Federal Housing Administration on the other hand, **does not loan money** to anyone. It **guarantees** the loans made by banks to **private** builders.

With this clearly in mind, it is possible intelligently to discuss the program of the San Francisco Housing Authority—involving construction of homes with money borrowed largely from the United States Housing Authority.

Holly Courts, located in the Mission District, was the first project to be finished under the USHA program west of the Rocky Mountains. Its 118 families live in a unique and carefully planned community which has most of the conveniences necessary for modern living. The story of Holly is well known to most local people interested in home construction.

Experience gained in the construction of Holly Courts is being applied to the rest of the local program. From the construction angle—how material and equipment stand up under usage. In management—how the room arrangements suit the needs of our tenants. Such information is passed along to architects and contractors engaged in building later projects.

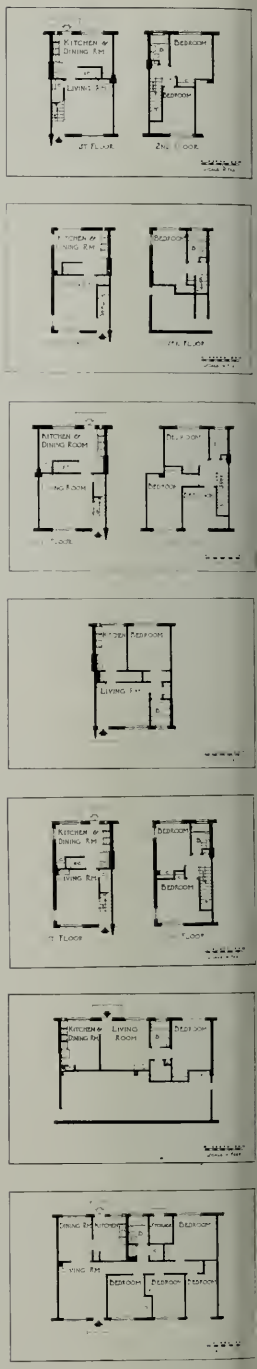
Potrero Terrace was the second project started by the Housing Authority and will be opened in March.

SUNNYDALE A NOVEL DEVELOPMENT

Sunnydale, third development undertaken and second in order of opening, is nearly completed. Plans were drawn by Roland I. Stringham and Albert F. Roller. It is the largest public housing project yet undertaken in the west. Since Sunnydale has not been opened for occupancy at the time of writing, assessment of its operation and functioning is premature. Much has been learned during its construction which will be of great value as future projects are built.

Sunnydale will be judged by the public in many ways: Is it livable? Does it have architectural beauty? How about the landscaping? In short, how does it "hang together?" It provides a local opportunity to examine the merits of large scale public housing construction. Its 772 dwellings are a city in themselves. How novel a development this is in city planning can be appreciated by comparing this Sunnydale Community with the motley collection of new and old houses, truck gardens, trailer camps, and other features common to the suburban limits of a California city that one finds just outside its western entrance.

Rolling slopes leading from the surrounding hills of McLaren Park onto the drainage plain between them makes for a natural and peaceful setting. The Mission district lies hidden behind and to the west, providing easy access to sections of the city which are important to low income families. To the east, Visitacion Valley invites prospective tenants of Sunnydale to a shopping center, several churches, schools, entertainment, and work.



FLOOR PLANS TO SUIT DIVERSE NEEDS

ONLY THE LANDSCAPING AND STREET WORK REMAIN TO BE DONE TO MAKE THIS ROW OF LOW-RENT HOUSES IRRESISTIBLE TO THE HOME SEEKER

A CLOSE UP OF ONE OF THE COMPLETED HOMES ON OPENING DAY . . . PICTURE ON THE RIGHT SHOWS TRIO OF SCHOOL GIRLS ADMIRING SCENERY FROM LIVING ROOM WINDOW OF COMPLETED DWELLING

STREET VIEW OF ONE OF THE EARLY COMPLETED HOUSES IN SUNNYDALE

Long talked of as a technique of modern city planning: a means of eliminating useless municipal expense in maintenance of the extra pavements which are inevitable when traditional gridiron street plans are followed, the super blocks in Sunnydale are genuine assets. Large, safe areas enclosing many dwellings result which contain eleven playgrounds for preschool age children, as well as numerous parking areas. In these protected sections there is also more room for gardens, service walks—room for living. The super blocks take the place of the well known chaotic criss-cross of modern speculative subdivision: twenty such blocks would ordinarily cover a comparable area.

A HOUSE A DAY FOR 90 DAYS

The builders, Barrett & Hilp, whose contract was for $2,080,552, were able to develop Sunnydale at the rate of one building a day for 90 working days after they began construction. This speed resulted in part from the simplicity of the four basic designs. Such simplicity made extensive duplication of construction processes possible. When aided by large scale purchase of materials and long term steady wage agreements with the building trades unions, it was possible to make the building of the project an economical and efficient procedure.

There are no common entrances or vestibules in the project. Each dwelling is a house unto itself; an individual entity—even though connected by common walls to the next home. standards, adequate facilities are offered. Each dwelling unit has a cooler, combination sink and laundry tray, an automatic storage water heater, a table-top gas range and a circulating gas heater. All windows are steel sash with casement vents and tile sills. Pleasing shades of white, cream, cream, brown and buff cover the exteriors of finished structures. Thick red-shaded shingle tile roofs blend with green sash trim and the surrounding landscape. Shrubbery and grass already begin to effectively bring out a "lived-in" atmosphere. Soon gardens planned by

tenant families will accentuate this.

Arrangements have been made with the Park Department for creation of a public park and playground on the boundary of the project and Visitacion Avenue. Facilities will include a baseball field and play equipment. Crocker Amazon playground is nearby and to the west and is the largest supervised playground in the city.

All of these features and many more are incorporated into the pattern of living which by its nature guarantees the success of Sunnydale. Here it is completed and within our midst. Take our advice, and "See for Yourself."

CONSTRUCTION METHODS DESCRIBED

Featured in design is the simplicity of construction which was accomplished. Ground floor slabs were placed over a natural rock asphalt base which is moisture resistant and as a further precaution against moisture, drain tile was placed along the walls on the high side to catch subsurface drainage and lead it away from the buildings. The underside of the second floor slabs was utilized as ceiling for the first floor and wood trusses were designed for the roof, the bottom chord of these trusses serving as ceiling joists.

Each dwelling unit consists of a living room, kitchen or kitchen and dining room combined, and one, two or three bedrooms, a bathroom and adequate closet spaces. The floors throughout are covered with 1/8 inch asphalt tile, greaseproof asphalt tile being used in the kitchens and linoleum is used in the bathrooms. Exterior walls are furred, plastered and painted and interior partitions are of frame construction anchored to the concrete with Rawl Drives, plastered and painted. Except for the first floor ceiling, which is of concrete, the remainder of the walls and ceilings are plastered. Oak stairs, stained and waxed, were installed between first and second floors. Units are heated by means of space heaters and each unit is equipped with a gas range and water heater. Each unit has an individual front and rear entrance.

The progress and methods used by the contractor on this project were outstanding in many respects. Foundations were excavated by means of trenching machines and concrete for the foundations was poured in these trenches without forms. Forms for the walls were built at a central framing yard located on the project site and were one story high and of such length as would lend itself best to handling and to reuse. Forms were carefully planned for use on the various types of buildings and also with the thought of concealing joints as much as possible. Reuse of the forms was of course carefully considered and panels typical to the several buildings were devised. These panels were moved into position by means of truck and crawler cranes and after the concrete was poured they were stripped by the same method. Inside forms were made small enough to pass through window and door openings to be used in other buildings.

Trusses were assembled at the central framing yard also. There being 7,200 trusses required, production line methods were used in their assembly, cutting, boring and grooving of truss members being done on one line while assembly was done on another line. These trusses were transported to the various buildings by Ross Carriers and placed by means of cranes.

Another successful production line method applied to this particular job was the fitting of doors to the frames. There were approximately 8,000 doors on the job. Jambs were set by means of templates in order that all jambs would be alike. Mortising and boring for locks was done at the central yard and a portable planer was used for the purpose of prefitting and beveling the doors. Doors, when delivered to the building were ready for installation.

DETAIL OF ENTRANCE TO BAR AND TERRACE LOUNGE, HOTEL CLAREMONT, BERKELEY, CALIFORNIA

FREDERICK L. CONFER, ARCHITECT

From the huge plate glass windows, cantered outward on a 15-degree angle to eliminate reflections, one beholds a panoramic view of the city of Berkeley, the bay bridges and, on a clear day or starry night, San Francisco's matchless skyline.

VIEW FROM ENTRANCE TOWARD FRONT, WILSON'S RECORD LIBRARY, SAN FRANCISCO
Morrow & Morrow, Architects

AN ACOUSTICAL PROBLEM
PRESENTED BY A STORE

THE PROBLEM was to install in two second story rooms, covering a space of $28\frac{1}{2}$ by 36 feet, quarters for an organization which deals with phonograph records on the basis of (a) sale; (b) circulating rental library; (c) playing on the premises.

Plan requirements—

1. Shelf space for records.
2. Public space (consulting catalog, reading, etc.)
3. Attendant (cashier, wrapping, etc.).
4. Five playing booths (reasonably sound deadened).
5. Storage.

THE SOLUTION adopted presents the following advantages: (a) conservation of almost entire window frontage; (b) spacious-appearing public space; (c) incorporation of free-standing central column into partitions; (d) proximity of services to previously existing plumbing and vent shaft.

SOUND DEADENING and insulation of the playing booths was an important technical problem. The principal means employed were:

1. Two completely separated lines of construction in all partitions, with one layer of celotex nailed to each outside face and two layers of loose celotex between.

2. Celotex nailed to under side of ceiling joists; one layer of loose celotex and one layer of quilt above ceiling joists.

3. Celotex cushions under all plates; also under each bearing of such features as conduits, which are attached to one side only of the double construction.

VIEW LOOKING TOWARD ENTRANCE, WILSON'S RECORD LIBRARY, SAN FRANCISCO
Morrow & Morrow, Architects

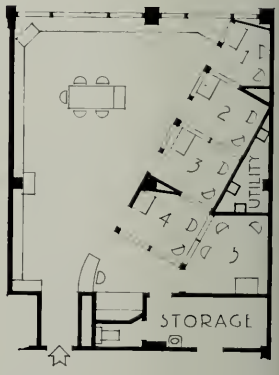
4. Double doors, with felt jamb stops and automatic base sealer in bottom rail.

5. Double glazing of all lights, with different thicknesses of glass on each side of partition; all glass set in felt.

6. Treatment of inside ventilating ducts to prevent piping of sound between booths.

The chief sources of weakness (sound leak and transmission), other than the unavoidable doors, are (a) the windows, which were nevertheless adopted for reasons of policy; and (b) the floors of the building, which had to be accepted for economy.

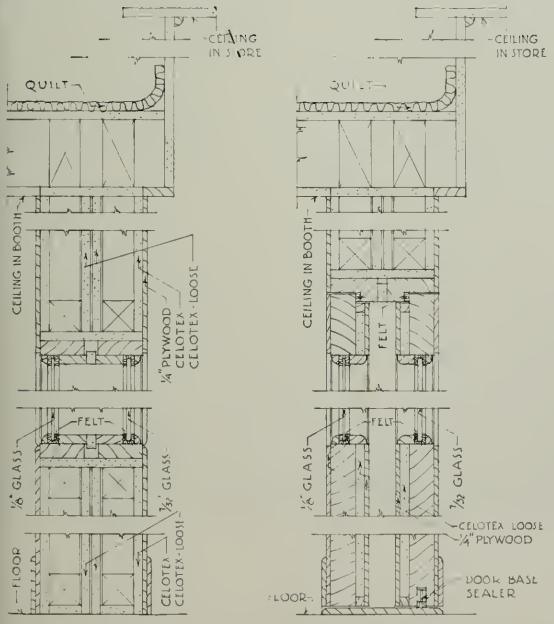
The cost of complete "sound-proofing" would have been prohibitive. A person in silence can hear sound through the partitions. But the results of the foregoing precautions, in practical terms, are that (a) while playing records in a booth, one is not conscious of playing going on in adjoining booths; and (b) while conversing in the public space, one is not aware of playing going on in any or all booths.



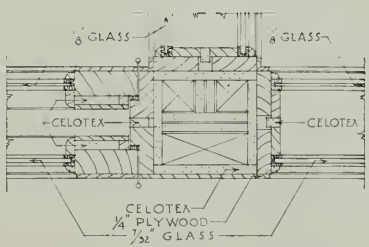
FLAN
Scale—1/16"=1'-0"

DECORATIVE SCHEME—Wainscot, blue-green; window band (in public space only) dark blue; upper walls and ceiling, natural celotex; entrance and office recesses, lemon yellow; floor, purple-brown; furniture, lemon yellow and chromium; table and counter tops, black.

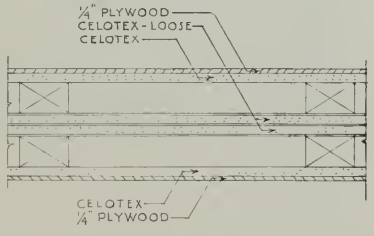
VIEW LOOKING TOWARD ENTRANCE, WILSON'S RECORD LIBRARY, SAN FRANCISCO
Morrow & Morrow, Architects



SECTION AT WINDOW SECTION AT DOOR



PLAN THROUGH WINDOW



PLAN BELOW WINDOW

DETAILS OF BOOTH PARTITIONS
Showing Sound-Deadening Construction—Scale—1½"=1'-0"

W. L. VALENTINE PRIMARY SCHOOL, SAN MARINO, CALIFORNIA
Marsh, Smith & Powell, Architects

W. L. VALENTINE PRIMARY SCHOOL, SAN MARINO, CALIFORNIA
Marsh, Smith & Powell, Architects

View taken from patio . . . note fountain on right . . . tiled roof extends well out to provide shade for class rooms on warm days.

SCHOOL HOUSE TRENDS

IN SOUTHERN CALIFORNIA

By Ben H. O'Connor, Architect

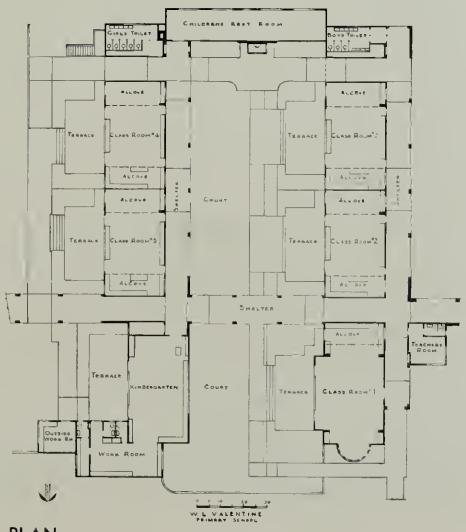
THE development of school design in Southern California has consistently followed the improvements in teaching methods and school administration. No doubt some of us cherish a nostalgia for the Little Red Schoolhouse of American legend, which is probably as it should be, if only to form a basis of comparison for the schools of today. The modern school is rapidly becoming a well integrated plant where the collaboration between the professions of teaching and architecture makes possible the utmost in educational progress.

The design of school buildings, in keeping pace with the educational system, has fortunately not led to an accepted standard, inevitably a mark of complacent self-satisfaction. Each new school seems to bring out much that is good and the designers have taken nothing for granted.

With the four schools pictured here, a variety of design and location furnishes more than the usual interest. Three are in small communities, one in Los Angeles. Three are built of reinforced concrete, one of wood frame and stucco. Again, three are elementary schools, one is a high school. Yet, with all this diversity of location, use and design, there is found a uniformity of excellence. A point to consider is that in a not too distant past the schools of the small town were seldom comparable to those of the larger cities. Many influences have been responsible for this change and not the least has been the architectural profession.

The Valentine School, in San Marino, designed by Marsh, Smith and Powell, is of one-story wood frame and stucco construction. It forms a separate group of buildings, connected by covered walks with the Henry E. Huntington School Group adjoining. Built in single wings around a series of courts, it includes no inside corridors. Access to class rooms is from cov-

APPROACH TO MAIN ENTRANCE, EL SEGUNDO SCHOOL, EL SEGUNDO, CALIFORNIA



PLAN

EL SEGUNDO ELEMENTARY SCHOOL, EL SEGUNDO

CLASSROOM UNITS

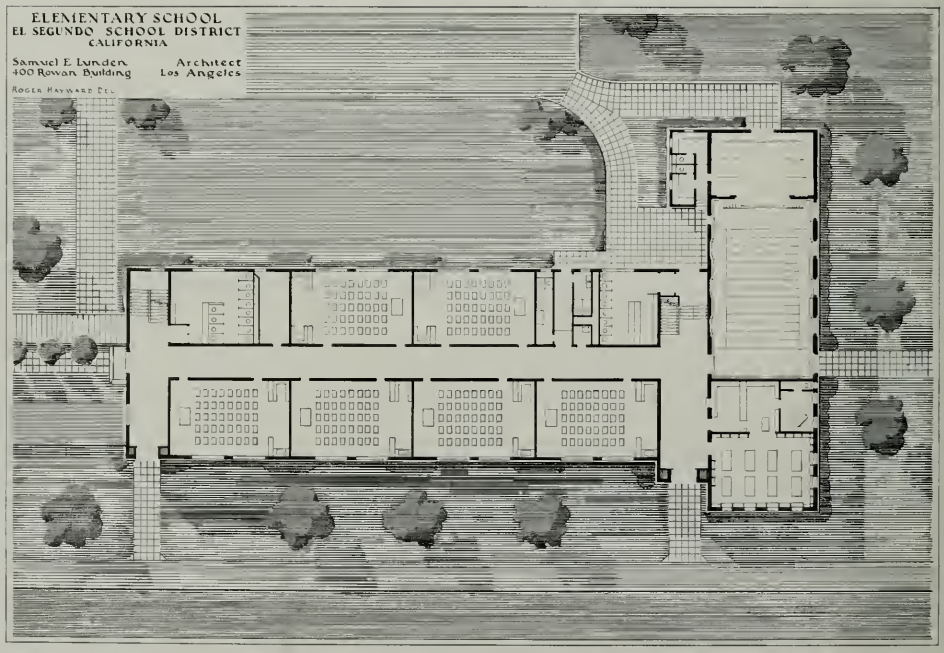
MAIN ENTRANCE

CALIFORNIA. SAMUEL E. LUNDEN, ARCHITECT

CLASSROOM UNIT

DETAIL

KINDERGARTEN, EL SEGUNDO ELEMENTARY SCHOOL, EL SEGUNDO, CALIFORNIA



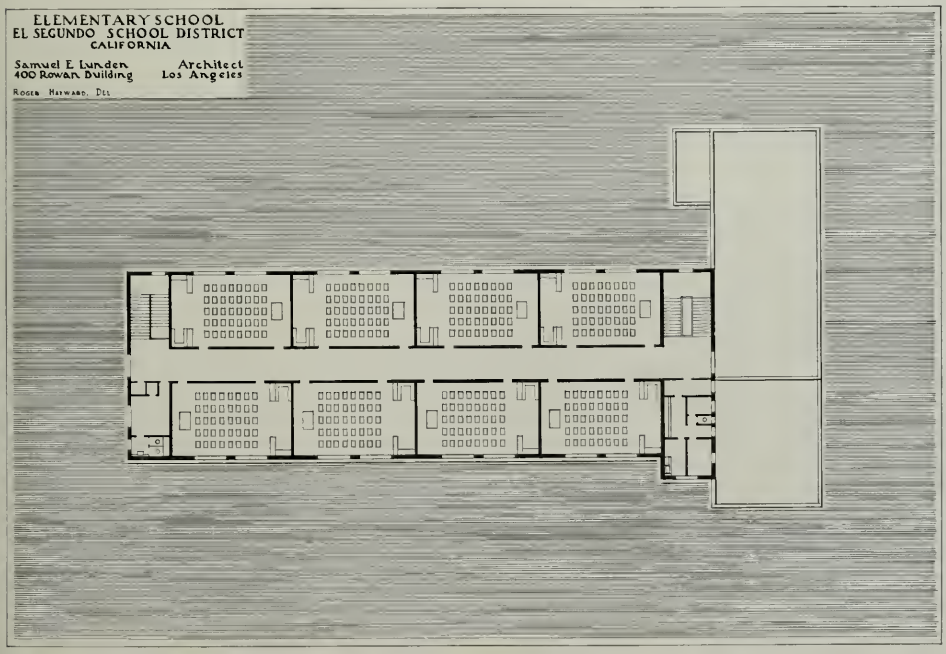
FIRST FLOOR PLAN

CLASS ROOM CORRIDOR, EL SEGUNDO SCHOOL

ered passageways on one side. Work and play terraces adjoin each wing on the other. We find in this plan a maximum use of the out-of-doors, which after all is where children belong.

In the El Segundo School, in El Segundo, designed by Samuel E. Lunden, plywood forms for the reinforced concrete walls have been used to advantage. In addition, the design has been enriched by the use of sgrafitto ornament in warm colors. Here is a field of ornament with which little seems to have been done in recent years. The mode lends itself readily to concrete buildings and affords a freedom to the designer not found in other methods. In the present instance both geometric and natural forms have been successfully adapted in the ornamental friezes.

In the Newport Beach Grammar School, at Newport Beach, the architect, Donald B. Kirby, has retained traditional forms of design while using reinforced concrete for the construction. Ornamental features have been deftly simplified to meet the limitations of the material without the loss of charm so often suffered in this method. Scale, too, has been carefully studied, as well as the handling of masses.



SECOND FLOOR PLAN

NEWPORT BEACH GRAMMAR SCHOOL, NEWPORT BEACH, CALIFORNIA
Donald Beach Kirby, Architect

The Abraham Lincoln High School, Los Angeles, designed by Albert C. Martin, shows the first units in a complete replacement of a large high school plant. Situated on top of Lincoln Heights, the old school, like Topsy, "just growed" up the hill. Replacing its dinginess, the new buildings bring to the location a freshness of color and design somewhat startling, yet none-the-less pleasing. Bold in its treatment, the design recalls the courage of Lincoln, his character and integrity. Of interest is the use of a pitched tile roof, in a time when sloping roofs seem anathema to the designer.

DETAIL OF ENTRANCE

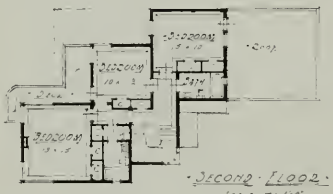
ABRAHAM LINCOLN HIGH SCHOOL, LOS ANGELES, CALIFORNIA
Albert C. Martin, Architect

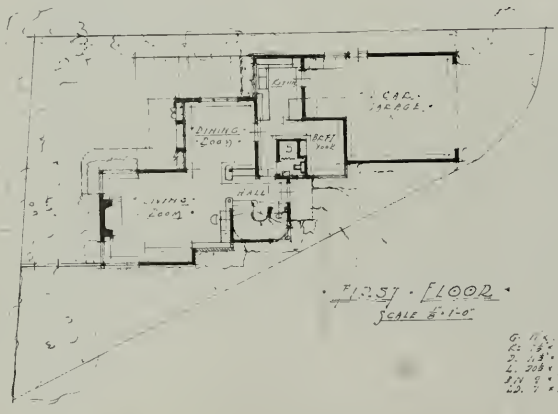
AUDITORIUM, ABRAHAM LINCOLN HIGH SCHOOL, LOS ANGELES, CALIFORNIA
Albert C. Martin, Architect

Courtesy "Housing"

HOUSE IN SAN FRANCISCO, CALIFORNIA

Vincent G. Raney, Architect





700 CALIFORNIA BRIDGES

UNFIT FOR DEFENSE NEEDS

by F. W. PANHORST, State Bridge Engineer

CALIFORNIA'S Military Highway has been given the "once over" by C. H. Purcell, State Highway Engineer, with the discovery that practically one-half the bridges on this highway lack standard requirements of the War Department in case of an emergency. The State Engineer's preliminary study of the situation is part of our national defense program which calls for the construction and maintenance of substantial bridges to withstand unusual traffic conditions that may arise with the movement of troops and heavy trucks. Officials of the United States Roads Administration have recently emphasized the importance of early consideration of this highway reconstruction program.

Generalizing on the condition of some 700 bridges in California and their inadequacies for defense needs, F. W. Panhorst, State Bridge Engineer, writes:

"Bridges may be looked upon as a very expensive section of highway. Because of their cost, it is general practice to restrict the roadway somewhat at bridges, and in many cases—also because of the expense—bridges are not widened when the road is reconstructed to proper standards. The general result has been a lag in bridge construction with regard to providing proper roadway widths and standards of alignment at the bridge and its approaches. In these respects restrictions on travel are the same as in the case of the roadway except that the remedy in the case of bridges is harder to apply because of the greater relative cost.

"However, the maintenance of old weak structures is a condition which, if not remedied, has more sinister possibilities than the maintenance of narrow roadways or inadequate roadbeds. Usually, it is possible to get traffic over a road somehow, no matter how bad its condition, perhaps at the cost of some delay and extra maintenance. The failure of a bridge, or a major part of it, means that traffic stops and

An old timber truss bridge that collapsed under a truck and trailer loaded with a power shovel, both vehicles being considerably over the posted weight limit. The truck and fallen span lie in shallow water.

Illustrations courtesy California Highways and Public Works

Picture 1—Light, narrow bridge posted and likely to collapse if struck by a vehicle out of control; (2) Inadequate expansion detail in concrete girder span caused serious cracking; (3) Poor concrete in pile coupled with abrasion by floating drift resulted in pronounced weakening; (4) Support piles weakened by marine borers.

may wait hours or days for either a detour to be built or repairs to be made.

"In some cases other routes are possible at the cost of extra travel and extra road maintenance, but often—and this is particularly true of California with its large areas of rugged topography—there are no practicable detour roads. Only a few years ago highway traffic, including a unit of the United States Army, sat down and waited several days for a new bridge to be built over a deep ravine on the Redwood Highway to replace one that had failed completely and could not be repaired.

"It makes no difference so far as the effect on traffic is concerned whether a bridge fails because of weakness or is blown up by a retreating enemy. * * *

"At the present time there are 235 bridges on the State Highway System legally posted for less than the load limit provisions of the Vehicle Code. These reductions in the loading are based on factors of safety that are considerably less than those incorporated in the design of a new bridge, and this is permitted only because such bridges are under regular and frequent inspection by competent men. * * *

"While it is true that these posted bridges are being repaired or replaced continuously, others are steadily deteriorating or being damaged to the point where they also must be posted, and many large and strategically located structures are included in this classification. In addition to the above number there are 94 bridges posted for reduced speed either because they are not strong enough to withstand the pounding of heavy high-speed traffic, or because impact from a mishandled vehicle might bring about complete collapse of a span.

"It is estimated that about 230 more bridges may have to be posted for reduced loading within the next two or three years. Another 320 bridges or so are not up to modern standards, but it is expected—or at least hoped—they can be kept in service for several more years without posting for reduced loads.

1200 BELOW STANDARD

"Although not included in the class of weak bridges, there are about 430 other bridges inadequate in either width of roadway or alignment of the bridge and approach roadway. Thus there are about 1200 State bridges, out of a total of 4200, not up to an acceptable standard, and the general condition of 8000 or more bridges on county roads is known to be a still more serious problem.

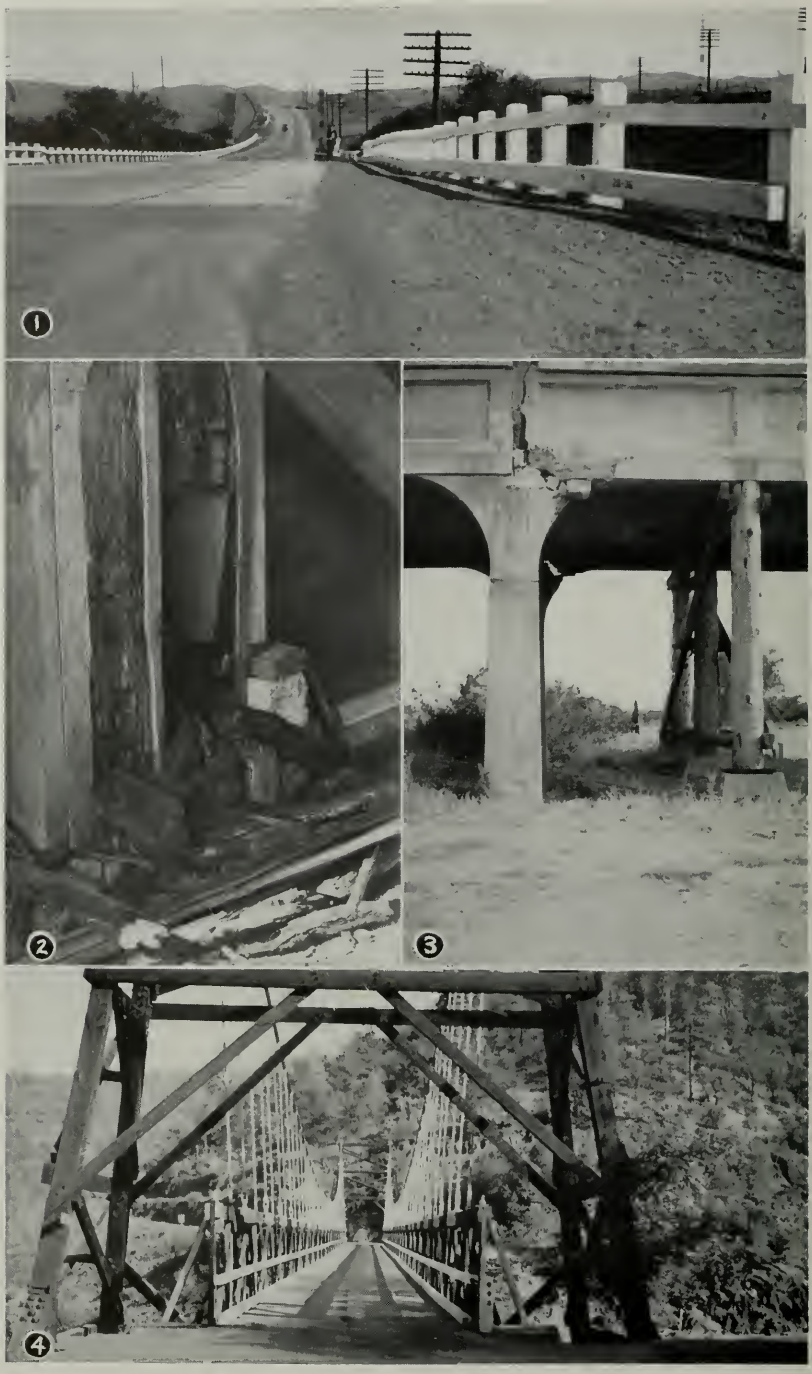
"At the beginning of the current biennium it was estimated that about $9,000,000 would be required to replace the bridges unsafe for legal loads. Many bridges included in this total have been replaced, but others—as already stated—have reached the same stage. It was estimated also that it would take $35,000,000 to replace all the structurally inadequate bridges, that is, all bridges operating under a material reduction of the normal safety factors. While some of the most dangerous bridges have been repaired or replaced during this biennium, the economic picture is not much improved because of the steady deterioration of substandard bridges already referred to.

"Now let us look at the situation on Military Roads alone.

"The War Department recently requested that the Public Roads Administration, in cooperation with the States, make an estimate of the cost of bringing up to the desired standard, highways tentatively selected by them for their military importance.

"It was found that there were about 1500 bridges on this military network in California and, although it included our best and most important State highways, there were 200 bridges that should be replaced and 500 more that should be strengthened. The estimated cost of doing this, exclusive of any road approach work, was about $12,000,000, in addition to which there would be the cost of other bridges on extensions of highways not yet built.

"It must be realized that even if money is provided for reconstructing these substandard bridges, they still can not be replaced over night. It would be necessary to make surveys to establish the proper highway location, to obtain foundation data and to prepare plans and specifications before construction can even be started. In the meantime, expensive repairs may have to be made and use of the highways continue to be limited by the reduced load limits at the bridges.



Pictures 1 and 2 show decay in bents of this timber overhead structure evidenced by settlement of the deck. No. 3—A defect in expansion detail of concrete girder structure resulted in disintegration of beam. Note temporary timber supports on shallow footings. No. 4—One-way timber suspension span posted and reinforced by adding additional hangers between originals.

"This limitation of the use of adjacent highways is a matter of general importance at all times. Very often the load limit on a bridge restricts hauling on many miles of highway because of the absence of alternative routes. If the capital investment in the roads is to pay its proper dividends, load restrictions on the bridges must be removed.

"Although heavy loads naturally occur more frequently on major traffic arteries, no road is immune from occasional loads of maximum weight. Consequently all bridges, regardless of the importance of the road, must be designed and kept in condition to safely sustain these maximum loads.

"Unfortunately, even the best technically trained expert can not say definitely when a weak bridge will fall, for the principal reason that it is governed to a large extent by the laws of probability or chance. The possibility of the right number of loads coming onto the bridge in just the right position to cause the greatest stress in every critical member must be assumed, but the probability of such an occurrence may be rather small. If it does not occur for many years, heavier single loads than that for which the bridge is posted may cross over with apparent safety and seem to discredit the engineer's computations.

RISK ALWAYS PRESENT

"However, the risk is always there and it is well to remember that a bridge may be damaged by a heavy vehicle but not collapse until later on—perhaps under a vehicle that is far too light to cause any overstress in the structure. There have been many cases where State Highway bridges have been damaged to the point where their collapse could be expected momentarily. However, due to the constant inspection given to structures, whose strength is under suspicion, the condition has been observed in time to shore up the structure before it failed either under its own weight or a vehicle.

"In concluding it seems advisable to stress the point that while old bridges stand a lot of abuse they have a habit of giving up at critical times, and when they do it means serious delay and an economic loss out of all proportion to the failure of any other link in highway transportation."

EMERGENCY MILITARY STRUCTURES

(Continued from Page 22)

All wartime factors must be considered in the planning, including the possible difficulty of finding suitable materials in the theater of war and the dislocation of transportation facilities that war often engenders.

STANDARD TYPE BUILDINGS

The use of standard type buildings, planned in advance, is of course a tremendous factor in promoting economy of time and material. The plans now being prepared on the Army-WPA planning project will, when completed, constitute the standard for all construction.

Detailed plans for some 40 essential military structures have been completed and drawings for some 70 additional units will be finished in the future. These structures include warehouses, incinerators, prisoner-of-war enclosures, motor repair shops, power plants, hospitals, airdromes, remount depots, commissaries, mess halls and many other structures.

In working out the plans, a definite system has been followed from the outset of the project. This system also acts to reduce drafting and estimating time required on the project and to accomplish the elimination of waste in building materials. The system in general consists of a reduction of numbers and sizes and types of materials to a minimum. These materials are then applied to a standard design element or general plan, in such a manner that the ultimate simplicity in construction would be obtained with minimum waste.

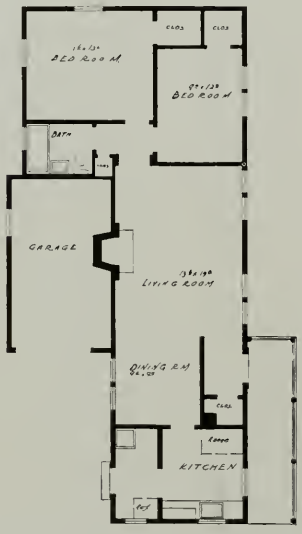
Standard details and bills of materials were made of all units, such as doors, windows, equipment and so forth. A basic building of 20 feet by 200 feet was adopted as a "standard structure"; every structural member and alternate roof and wall coverings were thoroughly analyzed for standardization and simplicity of design, economy, ease of erection and transportation of materials.

The standardization of this basic structure has proved so satisfactory that the same method is being used for other structures of various sizes and functions.

In addition to the usual military buildings, plans will be prepared for protective measures for civilian and military structures and personnel against aerial bombing.

HOUSE IN MORNINGSIDE COURT, SAN ANSELMO, CALIFORNIA

Mario Ciampi, Architect



PLAN

CONSTRUCTION OUTLINE

FOUNDATION—Concrete.

WALLS—Douglas fir.

EXTERIOR SURFACE—Stucco.

ROOF—Red cedar shingle.

INTERIOR SURFACES—Plaster.

FLOORS—Oak.

KITCHEN FLOOR—Linoleum.

BATH FLOOR—Tile, Pomona.

BATH WALLS—Tile, Pomona.

SHADES—Venetian, Smith Mfg.—L. C. Smith.

HEATING—Gas warm air.

EASTERN ARCHITECT
IS THRILLED BY THE WEST

By Wirt C. Rowland*

DOES an architect ever take an actual vacation from architecture?

Even on a hospital bed he may have vague dreams of things he has done wrong or illusions of beauty which he expects to find in the completion of what he started before he was stricken.

The writer started out to divest himself of all these impediments and to revel in the natural beauties and ultimate grandeur of hitherto, and to him, unexplored areas of the Great West. And laying aside all this former initiative duly exercised in Europe, he took a conducted tour and for fourteen days clung to the coat tails of a courier.

The tour started out from Chicago with 110 in the party and requisite accommodations by train on which we all lived for most of the time with only two places to get out long enough to wash our feet!

We passed through St. Louis and Kansas City. I mention these because I did not alight at these places and found by not doing so, in the short time allotted, that I missed two important objects of interest near their respective depots—at St. Louis, the new fountain by Milles—at Kansas City, the well known war memorial by Magonigle. I was comforted by the fact that, after all, I had cast such things aside.

Crossing Kansas the next day was one of my major thrills. It was the first time I had been West. Following the Santa Fe Trail, I became conscious of the fact that it was indeed the same route that my father had taken in 1850 on foot and horseback from Chicago to San Francisco, the year after the "Gold Rush" (and that much late for any gold!)

The arid lands stretched on and on with dreary poplar trees following river—or river beds—where just as he described them and where once he lost his way and had no food for three days.

Often I have regretted that I did not commit to paper when he told me from time to time of that trip which I never would have the intestinal fortitude to take in the same way. And—there I was, with almost every human comfort, except a sizeable dressing room—eating on a dining car and sleeping like a stone in an upper berth! In spite of modernity, I presume his way had its compensations as well as its difficulties—one could see all the beauties as well as the terrors of nature.

Colorado Springs was our first scheduled stop and my first view of real mountains I had longed to see. And spread before us in panoramic splendor were Cheyenne Mountain and Pikes Peak, the latter so famous by the sign on covered wagons in the early days of "Pikes Peak or bust" and on the return east, "Busted by—!"

We were scheduled to go by bus through the Garden of the Gods and to the top of Cheyenne Mountain. The former was interesting but not as extensive as I expected to see it. After going up and up and making several hair-raising turns, we arrived at Will Rogers Memorial. That was enough for me and I preferred going no further to the top of the mountain although the bus driver comfortingly assured me that it was only a few thousand feet higher! I remained on that landing, completely terrified—almost afraid to look out—and waiting for the earth to crumble underneath me. Waiting there an hour for the return of the bus, I was compelled to listen to the chimes of the Memorial Tower winging forth "Home on the Range" and another paltry tune, both in continual cry until I wished I had gone to the top of the mountain where I would have evaporated into thin air.

We were brought back to Broadmoor Hotel for dinner and from its terraces and across a wide pool, we could view the whole range of mountains in a much more comfortable manner and discourse on the sunset and the grandeur with soothing drinks.

Santa Fe, our next stop, remains in certain ways the most agreeable to me of any place

* In the Weekly Bulletin of the Michigan Society of Architects.

of the entire trip. They say that it is still unique among the Southwestern towns. To me, it gave a predominantly peaceful impression, alien even to the Old World. Being itself of an average altitude of some 5000 feet, all the terrors of height were in the distant mountains and the air itself filled one and effervesced like an aerial champagne.

We visited a neighboring Indian Pueblo, a comparatively small village populated by Indians of the Roman Catholic faith. This village bore the air of having been swept and garnished for our visit and an Indian dance was immediately given in the court for our benefit by strangely equipped natives, the exposed parts of whose bodies were stained by bright colors. In the foreground, stood two chiefs beating tom-toms with a detached air while the performers went through strange gyrations associated with some tribal dance.

I was told that the Santa Fe is the locale of Willa Cathers beautiful story "Death comes to the Archbishop." Besides a cathedral, the town contains the oldest church in America which has been latterly repaired, but the interior has the same curious atmosphere which pervades all Santa Fe.

The finest building we visited was the Hopi Indian Museum of comparatively recent date. It contains much of the ancient craft of that tribe, incidentally, some very beautiful rugs and pottery the tradition of which is not so well carried on at the present time. And if I be permitted to mention it, I had ideas of showing the people of that vicinity how to do their pole and mud buildings more effectively.

Albuquerque was virtually a shopping and supper stop and we pressed on to the Grand Canyon the next day. There again I experienced the terrors of great height looking down into the canyon from the rim. Nature is a better builder and more beautiful, for the interior of the canyon is filled on both sides with the most marvelous building shapes which stretch out to the bed of the Colorado River.

The color of the wall is less vivid than often pictured but is always soft and subtle and, upon a hazy day with rolls of clouds hovering near the brink, alternating with sunshine and shadow, one is transfixed as of a view of some fabulous and endless city peopled by a legendary race.

Los Angeles and Catalina Island—names I had long conjured with! Passing through Pasadena and by the beautiful panorama of the Sierra Madre Mountains, one arrives in as strange and exotic a depot as one could find and is ruthlessly torn away by bus to the hotel, never to behold again the court where palm trees almost consort with locomotives (each of the latter carrying a huge corsage bouquet!)

Los Angeles, sprang up fresh from the arms of Jove (or Croseus). The movie industry is an industry but its evidence as such aided by a climate ordained by Providence is entirely in contrast with the automotive industry. As I have said and continually do think that there —a bare living and bag of peanuts "is Paradise enow!"

Here—I had despised the place as over advertised. I had cursed the movie stars as superficial—and promiscuous humanity. But who could be unpromiscuous for any length of time in such an atmosphere? Where grows any and every kind of fruit and flower so freely—Where one may lie unfrozen under the umbrageous shade of palm or eucalyptus and tickle his nose with a rose.

One is duly chastened, however, in trying to reach Los Angeles Harbor by interurban trains. These trains preserve all the traditional discomforts of those we once had in Michigan. And to go to the harbor thus through a thirty mile stretch of oil fields and derricks which Los Angeles had to buy to call itself a port, is a sufficient discipline to finally and joyfully behold in all its pristine glory—Santa Catalina—the Pacific blue as the Mediterranean — the island shooting up out of it like Capri — and where "the flying fishes play."

To myself, I could hardly associate this place with America. It seemed as if I must be in Italy. Of course, as a resort it provides all those things required by the public, but as well affords some pretty robust sport called boar-hunting. I was satisfied in the short time we were allowed there the more comfortable pleasure of sitting on a terrace in the sun and

wishing I may never be torn from the place. I may say that my favorite drink is now orangeade, if only it could be made from fresh oranges of Los Angeles—(maybe "needled" a bit at times).

San Francisco seemed full of possibilities to me. In the press of schedule many of them did not develop. A trip by boat around the harbor in the morning disclosed the environs of great extent, two great bridges and also that small island, Alcatraz. I visioned a possible homecoming and calculated whether I could make land by swimming, like the Count of Monte Cristo, from that similar situation near Marseilles called "Chateau D'If!"

An afternoon in the Fair and part of the evening to see the lighting was enough to resist the question which would undoubtedly be put to me by the "fair"-minded. This much I can say—that it was simple in plan, not offensive —but after all like all fairs—full of wonders in which I was not at all interested.

The most impressive buildings I regard to be the Federal Pavilions with their outdoor murals done in brilliant colored linoleum with a red peristyle and columns of wood members very cleverly assembled, a very original use of temporary structures such as for a fair.

To me, the most impressive was the gorgeous massing of flowers, that element which is more indigenous and natural to the West coast than any derivation of Spanish or any other type of architecture, ancient or modern.

The city of San Francisco built, as it is on many hills (and providing as many alarming grades of streets) appears very much to me like Naples, with no front yards. A ride by bus revealed astonishing heights much to my discomfort. But my solace was the garden of an old Spanish church filled with brilliantly colored flowers.

The same ride revealed remarkable parks and many fine buildings in them such as museums, aquariums, etc., given by wealthy citizens and worthy to be compared with Rome or Paris.

By the foregoing, the half has not been told. For a trip on Sunday morning across the bay and up over the mountain revealed that remarkable natural monument, the Muir Woods! There is no impression from the mountain top of any grandeur, for the forest is buried in a huge and narrow crevice and the tops of the trees might as well be underbrush.

We speak of cathedral groves, but when, among these venerable trees, we strive to see the sky, our sight must reach beyond 300 feet and the sunshine may sift dimly to our feet on such an accumulated carpet that, in its great age would rival the most ancient rug of Bagdad.

Much has been published concerning the size of these trees but the most impressive facts displayed to me were shown on the section of a trunk where for each ring of growth, the date was designated from the smallest size, 960 A. D., through great events like 1021, Battle of Hastings, 1492, Discovery of America, etc. Like many, it is hard for me to realize, in my childish simplicity, that such things could exist before my grandfather who planted maples on our streets at home.

May I say that on this occasion of our visit to this remarkable natural remnant of growing things, for once the lighter minded of our group were silenced in awe. I can well vision that ancient sun worshippers waited in such a place for the first ray of sun that should rest on their kneeling figures. For that is the first impulse on entering what is really a sacred grove—to kneel and to worship in that which God—in the beginning created!

A friend told me that the finest mountain scenery would be between San Francisco and Portland. So far such was the case. The mountains, however, were veiled at top in clouds and the rain was also falling. I cannot say that they looked less impressive nor less beautiful. They attained a softness of outline and a distance of background such as in European haze.

In Portland it was dark and rainy—Portland the city of roses—yet about the only roses I saw were painted on the china at dinner time and we were denied a marvelous Columbia River drive. This rainy weather was the only exception to clear and satisfactory weather on the entire trip.

Seattle is one of those impossible places

which everyone with whom I have spoken agrees that it has no disadvantages—in fact —all is perfect there—next to heaven! I began to think so when I understood a salesman who said they have no sales tax!

They have bays, lakes, mountains and not a shabby house in the city. The bus driver told us the dogwood trees blossomed four times a year and roses the year round. Like all these coastal towns, their parks are hardly discernible from the grounds bordering on them. The University site is at the top of the city and I think of how inspiring and what a privilege to the student who can look out on the bays and lakes from his class room.

Only a short stay in Vancouver enabled us to see its very rich park, its newest hotel, the most modern and elegant of any I know. This city was the introduction however, to our way back, and the most impressive of any mountain scenery one may behold on this continent.

It is impossible to express deepest human emotions. Sometimes music will express that which we cannot in words. In contemplation of the grandeur of Western scenery through pictures, I had often wondered whether my emotion could endure that grandeur. (I wept copiously when going over the Alps.) There were many of our company I believe who did not fully appreciate that which they saw, and their attitude took the full bloom of my own appreciation away.

That word of humor of an elderly man was very timely when he said, as we could see our locomotive toiling around a curve and aiming for a tunnel, "I'm ready to jump off if the engine doesn't make that hole!"

So, the continuous procession of towering peaks and glaciers, a moonlight night and a clear day left one spellbound—if they could avoid the chatter about it! I find that retrospection holds me almost more in awe than the actual presence of those mountains.

Also, one might better take a day just looking at one range, for like the ocean, it would appear always to change, yet always to remain. I have a hearty respect for the rancher who rides a horse in those regions—not that he makes a name for himself in life but that every day he lives and breathes among the most remarkable objects which God has created.

I met a pony guide who said the season was over and that he would return to the ranch. I could have "signed off" from everything to let the world go by and join him—to ride a horse and be in the continual presence of those evidences of immortality—the mountains, sky and stars.

To approach a mere expression of Lake Louise is not possible. Poetry might do it and transcendently beautiful music. There—sheer beauty and grandeur are joined into one odalisque, as it were, of the Sultan—the highest mountain. And between her dark garments of pines parked at the apex of the lake, gleamed as it were, on her bosom, like a huge necklace of jewels—the Victoria Glacier.

There are gardens of brilliant flowers on the shore of this whitish lake—there is a hotel chateau at one side and a swimming pool for bathers. But—cynosure of all eyes is at the further end where black mountains descend in dark profile and the glacier gleams in a hazy sunshine. One almost loses his breath and on leaving, backs away, loath to depart—to print indelibly on his sight, one of the greatest and most beautiful combinations of scenery on this earth.

The air is still and scarcely is there a ripple on those milky waters from the melting of that ancient glacier — waters melting which were frozen before the birth of Christ, and standing in supreme beauty for ages and during so many —reflecting its quiet and majestic beauty in the lake as though to vie with its own image—a Sultan looking in her mirror but proud that the surface could not quite reveal her own pristine brilliance.

How hardly could I visit this spot alone. Almost would I be impelled to plunge in and give up my last breath with my eyes fixed upon this ancient jewel. Perhaps some lone and ancient Indian rider had broken upon its view and raised his arms in silent reverence to the "Great Spirit!" So should we do. Because natural beauty is the music of God—celestial voices fill our ears as we gaze upon his wonders —the dull affairs of life fall away and we stand in His presence, caught up in spirit at such a sight — a veritable vestibule of Heaven.

ARCHITECTS' BULLETIN

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Northern Section

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S.A.C.A. REORGANIZATION

AT DEL MONTE last October, the Executive Board was directed to study amendments to the Constitution and By-Laws, to be presented at the next Annual Convention.

Among the changes proposed was one intended to make the Association more truly representative of its members by limiting membership to those architects paying annual dues. It is difficult to understand how this would make the Association more representative of all the architects of the State, to speak as voice for all, which was the object of its original organization.

A much more truly democratic form of representation, policy-making, and administration, would consist in defining the voting membership of Conventions. Almost all Associations, professional or otherwise, confine the voting privilege at such official meetings to official Delegates chosen to represent geographical districts, in numbers proportionate to the total number of members and those in each district.

It would seem to be a fairly simple task to set up such a form of representative delegation, so that every district would receive its fair quota of representation in the voted decisions of the Convention; either through actual attendance of delegates, or through proxy authorities voted by Districts to individuals.

The A.I.A. system, which has proved, on the whole, very satisfactory, is available as a model for such a form of organization. And it would constitute a much more exact and authoritative expression of the opinions and wishes of the whole profession in California without any limitation as to financial prerequisite to casting votes. The question of dues need not enter into the voting for Delegates in Districts; but such more direct representation could hardly fail to produce a greater dues-paying element in the total membership.

COMPETITION

The troubled problem of architectural service, performed by non-licensed persons, is not peculiar to our own free and easy State. We quote an article recently appearing in the Minneapolis Builders' Exchange:

"Architecture vs. Contracting"

"There has been a tendency on the part of some to step out of their regular business or technical lines and to do work that rightfully belongs to the other. I am referring to builders who attempt to do Architectural designing and to Architects who enter the contracting field in conjunction with their architectural work. This has produced a bad situation and bad feeling and should be cleared up. I am reprinting here an editorial from the Northwest Architect written by one of our prominent Minneapolis architects which clearly shows how they stand and the builders have expressed similar opinions. It is, therefore, time for some action to curb the transgressor.

"There is a steady encroachment into the architectural field by building material companies and contracting firms who are but poorly equipped to

render such service. This condition represents a substantial loss to the profession. Those firms are not deserving of the support or specifications of the registered Architect. It would seem that every Architect would be interested in knowing which contractors, manufacturers and building concerns are **not** in direct competition with him.

"As a practical method of combating this ever-growing evil it has been suggested that a Fair Practice pledge be submitted by the Minnesota Association of Architects to every concern in the building industry in Minnesota. Adherence to the pledge might be acknowledged by the regular publication of that name in a 'Fair Practice' list in the 'Northwest Architect.'

"Complaints against registered architects who are allegedly engaged in the contracting business makes it obvious that there should be a definite and complete separation of professional service and non-professional service. If the architects are to be accorded the cooperation of the industry, there should be a serious realization of responsibility toward the rest of the industry. Architects likewise should be ready and willing to sign a pledge such as might be jointly agreed upon by the contractors and the architects with respect to the architects entering into the contracting field.

"This matter is of such serious importance as to warrant action by the Association at the Convention on November 8th. We have gone but a short way toward achieving such measures of self preservation as characterize the bar and medical associations of this and other States."

FOR NATIONAL DEFENSE

Professional architects can and should be employed directly on national defense construction projects on a much larger scale than at present, it was urged by the executive board of the State Association of California Architects, Northern Section, at a meeting in San Francisco February 6,

The board passed a resolution pointing out that officials of the Army, Navy, Air Corps and Corps of Engineers "are tremendously overburdened in attempting to serve their forces in the capacity that professional architects are equipped to do and have done efficiently for private industry."

Private professional architects, if allowed work on a professional basis, could serve national defense in the capacity for which they are best fitted, thereby enabling army and navy officials to give fuller attention to military affairs, the board added.

Copies of the resolution are being sent to President Roosevelt, to William S. Knudsen, chairman of the Office of Production Management, to War Secretary Henry L. Stimson and Secretary of the Navy Frank Knox. Also to officials of the National Defense Council, Quartermaster General Construction Division, Corps of Engineers, Bureau of Yards and Docks, Coast Guard Headquarters, Public Buildings Administration, American Institute of Architects and to state associations of architects throughout the country. The resolution:

WHEREAS there is a great national defense emergency and the Army, Navy, Air Corps and Corps of Engineers are tremendously overburdened in attempting to serve their forces in the capacity that professional architects are equipped to do and have done efficiently for private industry, and

WHEREAS private professional architects, if allotted work on a professional basis, could serve in the national defense emergency in the capacity for which they are best fitted, thereby enabling Army and Navy officials to give fuller attention to military affairs,

THEREFORE be it resolved that this body urge the employment of architects directly on a professional basis on a larger scale.

STATE BOARD

A recent meeting with Director Dwight Stephenson of the State Department of Professional and Vocational Standards offers hope that improved rules and regulations may be adopted which will give the Board of Architectural Examiners discretionary methods of procedure of increased benefit to our profession. We shall follow the progress of this proposed development with great interest.

1941 PROSPECT

Building contractors are generally very busy with large and small contracts, largely due, of course, to the National Defense Program. However, there is good prospect of increased private building activity, in which the architects may have a larger share.

1941 DUES

That nice little check for $5.00 will be welcomed at the S.A.C.A. office, 557 Market Street, San Francisco. Our office secretary, Miss Ashton, is quite willing to put in even overtime in recording your interest in the Association, as shown by this practical demonstration.

NEW STATE ASS'N. MEMBER

The secretary of The American Institute of Architects announces that the North Carolina Association of Architects was elected a State Association member of The Institute, effective November 7, 1940.

The officers of the Association are: President, S. Grand Alexander of Asheville, N. C., and Secretary-Treasurer, Luther Lashmit of Winston-Salem, N. C. Directors are: Thomas W. Cooper, J. B. Wilder, Anthony Lord, J. B. Lynch, and Eric G. Flannagan.

DEFENSE PROGRAM

The following resolutions were adopted at a recent meeting of the Building Industry Conference Board:

WHEREAS: The cost of living in the United States, according to official figures of the Department of Labor, has not increased for many months past and is still 17% below living costs in 1929, and

WHEREAS: Wages of building trades labor are higher today than at any time in previous history, and

WHEREAS: The present defense building and construction program will presumably all be concluded

within a year or more, resulting in large numbers of mechanics being thrown out of work unless private industry can absorb them, and

WHEREAS: Private industry on private building construction cannot hope to earn any commensurate return on its building investment if wages are further increased, and

WHEREAS: Certain important trades of the building industry have been asked to grant further increases in wages, and such increases if granted will result in further increases among other trades, therefore

BE IT RESOLVED: That this Board, representing the various organized groups of architects, engineers, contractors and material producers, hereby goes on record against any further wage increases in the industry until a thorough investigation has been made, and requests the cooperation of those trades who may now possibly be contemplating wage increases;

BE IT FURTHER FURTHER RESOLVED: That a copy of this Resolution be sent to all the constituent associations of this Board and others interested.

January 8, 1941

* * *

WHEREAS: This Nation has a national defense program requiring extensive planning and construction of miscellaneous defense works, housing, and other structures, and

WHEREAS: To handle the work in this emergency it will be necessary for existing government bureaus, or newly created bureaus organized for this purpose, to hastily expand their organizations, or for these bureaus to make use of local firms established and competent, and

WHEREAS: Such local firms of architects, engineers and contractors, are available and have, through many years of experience, found certain procedures, practices, and codes of ethics to be for the best interests of the client served and the profession or industry,

THEREFOR, BE IT RESOLVED: By the Building Industry Conference Board that, in the interests of economy and efficiency, the proper government bureaus be urged to avail themselves of the services of these established firms, and

BE IT FURTHER RESOLVED: That, to secure fullest cooperation and competency, governmental bureaus be requested to respect the established practices, procedures and codes of ethics of the particular profession or industry.

January 16, 1941

1940-41 COMMITTEES

The following have been named to serve on the various committees of the State Association, Northern Section, this year:

GOVERNMENTAL RELATIONS & LEGISLATIVE COMMITTEE: W. S. Hertzka (Chairman), R. Stanton, E. J. Maher, J. J. Donovan, H. J. Devine, A. J. Evers, H. H. Weeks.

PUBLIC RELATIONS: N. K. Blanchard (Chairman), M. Goodman, H. P. Clark, A. S. Lee, H. C. Allen, M. D. Reynolds, A. R. Williams.

PROFESSIONAL RELATIONS: W. C. Ambrose (Chairman), E. R. MacDonald, W. C. Perry, C. F. T. Kett, W. E. Baumberger, S. Haymond.

INDUSTRIAL RELATIONS: A. T. Hass (Chairman), T. J. Kent E. B. Page, W. H. Knowles, F. H. Reimers, H. M. Michelsen.

"SCRIBE": Harris C. Allen.

TECHNICAL RELATIONS: E. J. Maher (Chairman), J. E. Dinwiddie, W. T. Steilberg, A. C. Williams, W. G. Corlett, F. H. Meyer.

TREASURER'S COMMITTEE: M. J. Ciampi (Chairman), O. G. Hinterman, R. N. Pollack.

ARCHITECTS' BOARD OF CONTROL: H. C. Allen, V. G. Raney, M. J. Ciampi, N. K. Blanchard, H. M. Michelsen.

DISTRICT SOCIETIES: D. H. Horn (Chairman), C. F. Trudell, W. H. Rowe, E. E. Weihe.

ENTERTAINMENT: P. A. Ryan (Chairman), C. W. Mayhew, H. C. Allen.

DRAFTSMEN'S ORGANIZATIONS: Elizabeth Boyter (Chairman), H. E. Goodpaster.

OREGON CHAPTER 1941 OFFICERS

The 29th annual meeting and dinner of Oregon Chapter, A.I.A., was largely attended in the Pompeiian Room, Congress Hotel, Portland, Tuesday evening, January 21. Following cocktails, dinner was enjoyed and then came the inaugural ceremonies with speeches and bokays for the retiring officials, together with well wishes for the new officers who are: President, Roi L. Morin; Vice-President, Harry A. Herzog; Secretary, Kenneth C. Legge; Treasurer, Francis B. Jacobberger; Trustee for three years: A. Glenn Stanton; Trustee for two years, George H. Jones; Trustee for one year, Herman L. Brookman.

At the December meeting the secretary was instructed to write a letter for the Chapter extending the season's greetings to Harold W. Doty, ill at the Veterans' Hospital in Roseburg.

Following the business meeting Mr. Stanton introduced Fred Baker of the Baker-Barkon Company, who gave a very interesting lecture accompanied by slides.

PRODUCERS' COUNCIL

At the annual meeting of the Producers' Council Club of Northern California held at the Engineers Club of San Francisco on Monday evening, January 13th, the following officers were elected for the new year: President, Raymond Brown, Gladding, McBean & Co.; Vice-President, Gano R. Baker, Westinghouse Elec. & Elevator Co.; Secretary, Louis D. Saylor, Vermont Marble Company; Treasurer, Charles W. Kraft, Kraftile Company.

The Producers' Council Club is the San Francisco Chapter of the Producers' Council, Inc., a nation-wide organization of manufacturers of quality building materials affiliated with the American Institute of Architects, with headquarters in New York City. Prime objects of the organization are to promote the use of quality building materials and to maintain closer liaison between manufacturers of such products and the architects.

The president of the American Institute of Architects is a member of the Advisory Board of the Producers' Council.

1941 PUBLIC HOUSING PROGRAM

by NATHAN STRAUS, Administrator, U. S. Housing Authority

THE nation's public low-rent housing program, integrated with defense needs, is expected to reach its peak in 1941.

In this new year the United States Housing Authority will further extend its efforts on three fronts: slum clearance and the building of decent homes for the overcrowded lower income groups in our cities; rural housing—adequate, livable homes for farm families; and defense housing—homes for workers in the centers of defense industry, of military and naval activity.

Today approximately 190,000 people are living in low rent housing projects that are under jurisdiction of the USHA. This number is increasing about 15,000 a month. As impressive as this figure is, it is but a token of the need of this nation for better housing for the less fortunate among its citizens.

The income of the average family in the United States is only $1620. To many Americans this figure will seem quite small. But they must remember that one-third of our families have much less than this—less than $860—far too little to support them decently and healthfully. It is this group that USHA primarily is aiding.

Bad housing leads to ill health and poor citizenship. And this is a period in the nation's life when it needs good health and good citizenship more than ever before in its history.

The United States, we like to think, is the most enlightened nation in the world. Yet we were far behind other countries in the provision of adequate homes for those whose incomes are not sufficient to provide decent homes for their families unaided. Now that we have begun this program we cannot afford to halt or falter.

Last year the USHA initiated a program for better homes for our farm families. The first of these farm homes have been completed and, despite a limitation of funds, money has been set aside for hundreds of others.

Many Americans think of slums only in terms of overcrowded, unsanitary, tumbledown sections of cities. As a matter of fact there are probably as many slum-type dwellings in our rural areas as in our cities. A farm family has just as much right to live decently as the family of an urban worker.

This new phase of the activities of the USHA promises to be one of the most fruitful of all.

The defense housing projects, being built with USHA funds, will provide homes for 8,125 defense workers and their families. This essential part of the USHA's defense program now includes 19 projects that are being built by local housing authorities and will cost an estimated $24,099,000. Of these projects, 17 are now under construction—a number either complete or in advanced stages of construction. In addition, four projects are being built by the Army and the Navy and will cost an estimated $7,225,000.

The USHA has insisted in each case on record-breaking construction schedules for these emergency projects. In this we are receiving the full cooperation of the local housing authorities, the contractors and labor. The experience of these local authorities, their architects, engineers, and contractors in the construction of previous housing developments is a factor of great importance in obtaining fast work under the present emergency conditions.

It may well be pointed out that we have learned the lessons of the first World War. Then it was ten months after the United States was actually at war before an appropriation was made for the housing of shipyard workers. It was five months longer before Congress appropriated funds for the housing of workers in other defense industries. In the case of one housing agency in this period, its first homes were completed three months after the Armistice was signed. This time the need has been seen earlier and the nation has had the experience of the normal USHA program on which to build.

PORTABLE HOUSES ON INCREASE

Portable and ready-cut houses valued at $8,461,853 were produced in independent planing mills of the U. S. in 1939 compared with a total of $4,130,862 in 1937, according to figures in a preliminary report on planing mill products made public by Director William Lane Austin of the Bureau of Census.

The 1939 value of production for portable and ready-cut houses is the highest reported in the biennial Census of Manufacturers since 1929, when the total was $11,569,252. The highest total value ever reported, however, was in the 1925 Census of Manufacturers, $15,192,737, the first census in which details on planing mill products by kinds were assembled.

Figures for production of portable and ready-cut houses in independent planing mills (totals for a small amount of production in planing mills operated in connection with sawmills not included) were:

1939	$8,461,853	1931	$ 3,717,733
1937	4,130,862	1929	11,569,252
1935	4,065,669	1927	14,224,988
1933	1,639,879	1925	15,192,737

Aggregate value of all planing mill products in 1939 was $614,153,983, a moderate increase over 1937 when the value reported was $593,374,933.

Production of planing mill products in establishments operated independently of sawmills was valued at $282,309,839. Planing mill products fashioned in establishments operated in connection with sawmills had a value of $325,592,769. In addition, other industries turned out planing mill products as secondary products valued at $6,251,375.

Among listed planing mill products and their quantity and value were:

Dressed lumber, 15,435,432 M feet, b.m., $375,623,386.

Doors for general construction, 13,082,633 in number, $32,467,784. Other doors, number not reported, $11,044,694.

Sash, 34,992,700 in number, valued at $24,480,972.

Window and door frames, number 8,367,316, value, $21,388,216.

Other items included $4,303,848 worth of battery separators, $4,171,725 worth of tanks and vats, and $792,425 worth of silo stock.

Hardwood small dimension stock produced from rough lumber amounted to 220,438 M feet, b.m., valued at $12,966,133, and from slabs, edgings, and millwaste, 28,114 M feet, b.m., valued at $1,187,832.

Miscellaneous millwork and millwork not reported by kind, including molding, inside trim, and general millwork, was valued at $117,265,115.

ARCHITECTS AND DEFENSE PLANS

To cooperate with Mayor Fiorello H. LaGuardia in working out the details of passive defense for the metropolitan area, a Civilian Protection Committee of six architects has been appointed by Frederick G. Frost, president of the New York Chapter of the American Institute of Architects.

Harvey Stevenson of 101 Park Avenue, vice president of the Chapter, heads the committee, other members of which are: Geoffrey Platt of 101 Park Avenue, Harry M. Prince of the New York City Department of Housing and Buildings, Matthew W. Del Gaudio of 545 Fifth Avenue, Alfred E. Poor of 9 Rockefeller Plaza, and J. Andre Fouilhoux of 45 Rockefeller Plaza.

The appointment of the committee is a move "to implement the architects' desire to mobilize their technical training in planning and construction for utilization by military and civil authorities in case of emergency," Mr. Frost explained.

"Similar private organization of, and studies by, the architects of Great Britain proved of immense value when the Home Office in London finally turned to them for aid, although, as Mayor LaGuardia and his Emergency Board have pointed out, such preparations here are solely a matter of precaution, like that taken against everyday fires and other accidents," Mr. Frost said.

The new Civilian Protection Committee has asked the cooperation of the Sectional Committee of the American Society of Civil Engineers and other technically trained groups and individuals. In a letter to the presidents of all architectural societies in the metropolitan area Mr. Stevenson says:

"President Frost has appointed a Civilian Protection Committee of the New York Chapter of the American Institute of Architects to cooperate with the Mayor and with representatives of other architectural, engineering, landscape, and planning societies on passive defense. It is the earnest wish of this committee that your organization assume equal responsibility in this important work, and that you designate a well qualified representative to give us the benefit of his advice and your cooperation.

"Let me emphasize that this is a long range precautionary undertaking, promising not only no advantage to individuals or groups but also the probability of considerable personal sacrifice."

BOOK REVIEWS

PENCIL BROADSIDES, by Theodore Kautzky; Reinhold Publishing Co., 330 West 42nd Street, N. Y. Price: $2.00

A most delightful book full of the pencil work of this well known artist. The subject matter has been chosen with discrimination and a feeling of excellent balance is discernible throughout the book.

Fine pencil drawing and sketching should be the inspiration of every architect and draftsman, and certainly inspiration may be had from such books as this one.

SALES ENGINEERING, by Bernard Lester; John Wiley and Sons, 440-4th Avenue, N. Y. Price: $2.00

This is a book which will have a direct appeal to the manufacturers' representatives; one which they will find a place for on their desks or study table at home. Here we are told how to sell equipment and how to offer real services in the selection, application and use of equipment. Technical men in the field of sales and service will find a valuable handbook in this little volume.

HAGIA SOPHIA, by Emerson Howland Smith, Associate Professor of Fine Arts, Columbia University, New York. Columbia University Press, N. Y. Price: $10.00

A remarkable book which constitutes a complete study of one of the great living architectural monuments of the world. The aesthetics, archaeology, architecture and history of the great church of Hagia Sophia are in this book made to stand out as living studies, alive, warm and fascinating.

There are thirty-four diagrammatic detailed line-cuts and forty-six collotype plates to further enhance the value of the work. Byzantine culture and civilization give Hagia Sophia its importance and thus this book, devoted to the study of this church, fills a needed place, closes a gap in the literature of Byzantine architecture.

FAIREST OF COMPETITIONS

(Michigan Society of Architects Bulletin)

The Buffalo Chapter of the American Institute of Architects, through its secretary, Rufus W. Meadows, commends an Eastern building material company for its open-minded and fair method of selecting an architect for its new warehouse in that city.

"By selecting a list of all qualified architects in Buffalo and publicly drawing one name, the company has given all qualified architects in this district an equal and fair chance of obtaining this job," Meadows states.

"We also thank the company and express our unanimous approval of its policy of giving its many jobs to local architects in the districts in which the work is to be carried out. This is a policy which we are sure will give a maximum of efficiency and the utmost satisfaction in the construction of buildings and at the same time create the best of good will toward the company in the many districts in which they operate."

Which recalls that a few years ago, William Orr Ludlow, then of Ludlow and Peabody, architects, won in a similar "competition" conducted by the Johns-Manville Corporation. Said Ludlow, "What does a man think about when he holds in his hand an envelope containing either a two-million-dollar commission,—or nothing? Something like this went through my benumbed mind: In this little envelope a skyscraper or a blank piece of paper! One chance in twenty! Pshaw, that's what I take every time I jay-walk across Fifth Avenue, and I've never been hit yet. I wonder whether Tom Hastings, or Breck Trowbridge, or Whitney Warren will get it!

"Now," said Mr. Manville, "begin here and open up,—each one announcing in turn what he has drawn." With painful slowness the words began to come to my somewhat clouded mind,—"Nothing doing," "Blank," "Blank." "Left again." Then the brilliant deduction began to dawn in my mind that if all the others got blank, I got it! The suspense was terrible, so with my table knife I slit my envelope and cautiously pulled a little at the card inside,—cat and mouse performance. Hello, what's this! A tiny wreath appears,—yes, I suppose they all have wreaths on them like on other tombstones. Great—"You Win!" I took the blow just like Tunney,—manfully—everything went around inside my head, but at the count of ten I recovered, found everybody still there, and sat trying to look like a sphinx but feeling like an opium addict. Then John Cross, who had peeped at my card, spilled the beans by shouting, "Here he is!" I faintly heard yells of "Speech! speech!"

Twenty handshakes from as many slightly disappointed but complacent men;—then, "Glad you fellows are going to be my architects. I want you to begin right away, see you tomorrow,"—and so ended the fairest and most satisfactory competition on record.

HONORED

John D. Gallaway, C.E., of San Francisco, has been awarded the Thomas Fitch Rowland prize by the American Society of Civil Engineers for a technical paper entitled "Design of Rock-fill Dams." Honorary membership in the Society has been tendered Mr. Gallaway as a further recognition.

STRUCTURAL ENGINEERS ASSOCIATION

This year's officers of the Structural Engineers Association of Northern California, are as follows: President, Clement T. Wiskocil; Vice-President, Henry C. Powers; Secretary-Treasurer, Franklin P. Ulrich; Directors, Henry C. Powers, Franklin P. Ulrich, Thomas F. Chace, A. V. Saph, Jr., and Clement T. Wiskocil; Representative on the Building Industry Conference Board, Mac D. Perkins; Editor of Main Street Bulletin, Robert N. Swartz.

Tuesday evening, February 4, members of the Association were treated to an informative talk by W. M. Brobeck, research associate at the University of California, on "The Cyclotrons of the University of California."

In this illustrated talk Mr. Brobeck told of the construction and operation of the new and old Cyclotrons and some of the accomplishments of Dr. Lawrence (Nobel Prize Winner) and his staff at the University of California.

This being a current subject the talk proved of great interest to structural engineers because of the unusual structural requirements in the construction of the Cyclotrons.

ENGINEERING DRAFTSMEN NEEDED

Engineering draftsmen in various optional fields are urgently needed by the United States Government. A civil service examination held last fall failed to produce enough eligibles to meet the demand of the national defense program. The salaries of the positions range from $1,620 to $2,600 a year less a 3½ per cent retirement deduction.

Optional branches in which applicants may qualify are: Architectural, civil, electrical, heating and ventilating, lithographic, mechanical, plumbing, radio, structural, topographic, and general—which includes any other branch except aeronautical, ordnance, or ship. The Commission is already accepting applications for engineering draftsman positions in these three optional branches under previously announced examinations. High-school education except for substituted drafting experience is required. Applicants must also show paid drafting-room experience, or completion of a drafting course in a school specializing in drafting, or college engineering or architectural study; in addition they must show drafting experience in the optional branch chosen.

Competitors will not be required to take a written test, but will be rated on their education and experience as shown in their applications, and on corroborative evidence.

Further information and application forms for the next examinations may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D. C.

Among the Architects

W. J. BAIN HEADS WASHINGTON CHAPTER

William J. Bain of Seattle is the new president of Washington State Chapter, A.I.A., and with him on the official board this year are the following: First Vice-President, Clyde Grainger, Seattle; Second Vice-President, John W. Maloney, Yakima; Secretary, John T. Jacobsen, Seattle; Treasurer, Clare Moffitt, Seattle; Member of the Executive Board for three years, Victor N. J. Jones, Seattle.

Announcement was made at the last Chapter meeting of the 1941 Sketch Competition for architects and draughtsmen, sketches to be received at the office of George Gove, Chairman, 1701 Puget Sound Bank Building, Tacoma, or La Monte Shorett, Securities Building, Seattle, by March 1.

RESIDENCE WORK

Chester H. Treichel, 696 Cleveland Avenue, Oakland, is busy on residence work in the Peninsula and East Bay Districts. He has recently finished plans for a house for Mr. Jewell in San Mateo and a $7500 home for an unnamed client in Lafayette, Contra Costa County. He has also awarded a contract for an eight-room, $15,000 house in Hillsborough for J. W. Rowe.

SANITARIUM BUILDINGS

Working drawings have been completed by Houghton Sawyer, 337-17th Street, Oakland, for a group of buildings for the Pinehaven Institution at 30th Avenue and Wawona Street, San Francisco. Besides an administration building, there will be dormitories, service and infirmary buildings.

OFFICE AND WAREHOUSE BUILDING

At an approximate cost of $150,000, the John A. Roebling Sons Company will build a one and two-story reinforced concrete office and warehouse building on the block bounded by 16th, 17th, DeHaro & Carolina Streets, San Francisco, from plans by Albert F. Roller, architect.

MOORE DRY DOCK EXPANSION

To handle its war preparedness contracts, the Moore Dry Dock Company will build a new plate shop and loft building on the Oakland Estuary. The company's own engineers have prepared the drawings which call for a steel frame structure, 100 x 400'.

WAITERS' UNION BUILDING

Plans have been completed by William G. Merchant, architect, Russ Building, San Francisco, for alterations to a two-story building at 1040 Geary Street, San Francisco, for the San Francisco Waiters' Union. Estimated cost of the improvements is $20,000.

NORTHERN CHAPTER MEETING

The annual meeting of Northern California Chapter, The American Institute of Architects, was held Tuesday, January 28, at the St. Francis Yacht Club in San Francisco.

A record-breaking attendance elected A. Appleton president, Lester W. Hurd vice-president, and John Davis Young was re-elected secretary-treasurer.

New directors include James H. Mitchell, the retiring president, Andrew Hass and Eldridge T. Spencer, all of San Francisco.

PUBLICITY

Institute Chapters are becoming increasingly conscious of the need of Publicity for the profession. One eastern Chapter, besides appointing a director of publicity, has the following sub-committees working under him, so that every possible channel may be covered: (1) educational movies; (2) talks in schools; (3) radio; (4) talks before clubs; (5) newspapers; (6) professional and trade publications; (7) exhibitions.

JUST STANDARD EQUIPMENT

Frank Lloyd Wright, the eminent architect, has designed a house in California with a stream running through the living room. This will be old stuff to certain speculative builders to whom a lake in the basement is standard equipment.—Roger Allen, architect, in the Grand Rapids Press.

COALINGA SCHOOL BUILDING

Bids have been taken for the construction of a one-story reinforced concrete classroom building for the Reefe-Sunset Elementary School District at Coalinga. Plans for the $100,000 structure were prepared by W. D. Coates, Fresno.

SAN MATEO RESIDENCE

A contract has been let for a seven-room $12,000 house in the Barwood Tract, San Mateo, for Claude J. Herschey. The architect is Mario Corbett, 802 Montgomery Street, San Francisco.

MACHINE SHOP

The Joshua Hendy Iron Works will expand by building a new machine shop, 130 x 480 feet, at Sunnyvale, Santa Clara County. L. H. Nishkian, 525 Market Street, San Francisco, is the structural engineer.

ICE DELIVERY PLANT

The Independent Ice Company has had plans prepared by John B. Anthony, 462 Elwood Street, Oakland, for a one-story ice delivery plant at Bayshore and Marin Street, San Francisco.

COLUMBIA UNIVERSITY AWARDS

The Eighth Boring Medal for excellence in design has been awarded to Gordon J. Wise of 124 Willow Street, Brooklyn, and first prize in the fourth annual Illumination Prize Sketch competition has been won by George T. Rockrise of 1435 56th Street, Brooklyn, it is announced by Dean Leopold Arnaud of the Columbia University School of Architecture.

Wise submitted the winning sketch in a competition for "A Music Center in Flushing Meadow Park" open to all fourth-year students of the School of Architecture. Rockrise, a graduate student and candidate for the degree of Master of Science in Architecture, receives an indirect-illumination lamp for his plans of "A Subway Entrance."

Wise's winning plans provide for a landscaped area surrounding a band shell with attendant services and outdoor seating arrangements for an audience of 2,000 people. The section of the former World's Fair site designated on a map supplied to the Boring Medal competitors is bound on the west by Fountain Lake, extends east 550 feet to 69th Road, and lies between Grand Central Parkway on the south and the I.R.T. subway tracks on the north.

The band shell sketched by Wise differs from the conventional semi-circular type by employing a flat horizontal surface with a curved lip across the top edge. Besides accommodating eighty musicians, his plan provides storage space for instruments and seats and includes a reception hall to be known as the "Green Room."

In keeping with the general character of the park buildings to be erected nearby, the facade of the band shell achieves its effect by a combination of mass and line, rather than through elaborate surface decoration. Trees and shrubbery define the area of the music center.

PASSING OF FORMER S. F. ARTIST

Ernest C. Peixotto, muralist and author, died December 6 at his home in New York. Mr. Peixotto was a native of San Francisco and studied under Emil Carlsen at the San Francisco School of Design. One of eight artists chosen to go to France with the American Expeditionary Force to reproduce pictorially America's part in the war, Mr. Peixotto later was commissioned a captain in the Engineer Officers' Reserve Corps and was with the force at Chateau Thierry, the Marne, St. Mihiel and Meuse-Argonne, sketching as he went. The drawings are now in the New National Museum in Washington.

LUCKY FRANK McCOY

Another record oil gusher came through for Frank J. McCoy on his Santa Maria holdings the past month. Mr. McCoy is known to Architect and Engineer readers as the owner of the delightful Santa Maria Inn and the El Encanto villas at Santa Barbara.

STUDENTS MORBID?

Following his recent visit to the School of Architecture at Eugene, Oregon, A. Glenn Stanton, former president of Oregon Chapter, A.I.A., reported that he felt the students were in a decidedly morbid frame of mind in regard to the practice of architecture. They did not appear to hold a particularly rosy view of the future. Stanton reported to his Chapter that he had written a letter to Professor Willcox and Dean Lawrence on the subject, which included the students' attitude toward the A.I.A., registration, etc. He said he had heard from Dean Lawrence, who said he had talked to the students and had tried to bring them to a healthier opinion on these subjects.

Editor's Note—We would like to have more details from Dean Lawrence with a message of encouragement to architectural students throughout the country.

CHAPTER HAS NEW BY-LAWS

A long postponed vote to the amendments of the Southern California Chapter By-Laws reached a climax December 9th, when a sufficient number of members attended to carry a favorable vote. All that now remains is for the Institute to approve the proposed changes.

The executive committee of the Chapter announces election of Cassatt Griffin as an Associate Member and Richard L. Cook and Amos W. Randall, Junior Associates. During the past year, 15 new members were elected to the Chapter. At the January meeting the new officers for 1941 were duly elected.

STATE EXAMINERS BUSY

On complaint of the Board of Architectural Examiners that he did not give written notice to his client that he was not an architect, Chris Erickson, arraigned in the Glendale Justice Court was found guilty of practicing without a license by Judge Burt Wix who imposed a fine of $50, or ten days in jail for violation of the state law.

HAS NEW L. A. OFFICE

Tom H. Pike, Jr., West Coast district manager for Tube-Turns, Inc., Louisville, Ky., has established permanent offices in Los Angeles, at 210 West Seventh Street. The entire West Coast and territory inland as far as Salt Lake City will be serviced from the new Los Angeles office.

TACOMA NARROWS BRIDGE FILM

Moving pictures showing the failure of the Tacoma Narrows Bridge were shown at the Western Theater in Los Angeles, January 8th, for the benefit of Southern California architects and structural engineers. Arrangements for the showing were made by Mark Falk, President of the Structural Engineers of Southern California.

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Bond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000 carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.00
3 ply per 1000 ft. roll	6.25
Sisalkraft, 500 ft. roll	5.00
Sash cord com. No. 7	$1.20 per 100 ft.
Sash cord com. No. 8	1.50 per 100 ft.
Sash cord spot No. 7	1.90 per 100 ft.
Sash cord spot No. 8	2.25 per 100 ft.

Sash weights cast iron, $50.00 ton.
Nails, $3.50 base.
Sash weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
City gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

SAND—	Bunker	Delivered
River sand	$1.50	$1.90
Lapis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80 and	$2.20
Del Monte white	50c per sack	

CEMENT (all brands, common, cloth sacks) $2.72 per bbl. f.o.b. car; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or deliv., 80c per sack. (Less 10c per sack returned, 2% 10th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White } 1 to 100 sacks, $2.00 sack, warehouse or delivery;

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.
(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $115 installed on new buildings; $140 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	⅝x2¼" T&G	⅜x2" T&G	⅝x2" Sq.Ed.
Clr. Otd. Oak	$144.00 M	$122.00 M	$141.00 M
Sel. Otd. Oak	118.00 M	101.00 M	114.00 M
Clr. Pla. Oak	120.00 M	102.00 M	115.00 M
Sel. Pla. Oak	113.00 M	92.00 M	107.00 M
Clr. Maple	125.00 M	113.00 M	

Wage—Floor layers, $10.00.
Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron—Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$30.00 per M
No. 2 common	28.00 per M
Select O. P. common	35.00 per M
2x4 No. 3 form lumber	22.00 per M
1x4 No. 2 flooring VG	58.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	70.00 per M

Slash grain—

1x4 No. 2 flooring	$45.00 per M
1x4 No. 3 flooring	42.00 per M
No. 1 common run T. & G.	33.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.10 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.10 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded)
5/16" 3-ply and 48"x96" ..... $32.50 per M

"Plywall" (wallboard grade)—
¼" 3-ply 48"x96" ..... $37.50 per M

"Plyform" (concrete form grade)—
⅝" 5-ply 48"x96" ..... $110.00 per M

Exterior Plywood Siding—
7/16" 5-ply Fir ..... $ 90.00 per M
Redwood (Rustic) ..... 85.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $100.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high, per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot. Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M.

For smaller work average, $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work ..... per yard 42c
Three-coat work ..... per yard 60c
Cold water painting ..... per yard 10c
Whitewashing ..... per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.50
2 coats, lime mortar hard finish, wood lath	.85
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	.90
Ceilings with ¾ hot roll channels metal lath plastered	1.80
Single partition ¾ channel lath 1 side (lath only)	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.30
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.40
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50
Wood lath, $5.50 to $6.50 per 1000.	
2.5-lb. metal lath (dipped)	.19
2.5-lb. metal lath (galvanized)	.21
3.4-lb. metal lath (dipped)	.22
3.4-lb. metal lath (galvanized)	.24

¾-inch hot roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations.
$13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.

Plasterers Wage Scale	$1.67 per hour
Lathers Wage Scale	1.60 per hour
Hod Carriers Wage Scale	1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—

From $70.00 per fixture up, according to grade quantity and runs.

Roofing—

"Standard" tar and gravel, $6.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $6.50 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Cooper, $16.50 to $18.00 per sq. in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure ..... 8.00 Square
5/8 x 16" — #1 Cedar Shingles, 5" Exposure.... 9.00 Square
4/2 #1-24" Royal Shingles, 7½" Exposure ..... 9.50 Square
Re-coat with Gravel, $3 per sq.
Asbestos Shingles, $15 to $25 per sq. laid.
Slate, from $25.00 per sq., according to color and thickness.
1/2 x 25" Resawn Cedar Shakes, 10" Exposure 10.50
3/4 x 25" Resawn Cedar Shakes, 10" Exposure 11.50
1 x 25" Resawn Cedar Shakes, 10" Exposure 12.50
Above prices are for shakes in place.

Sheet Metal—

Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)

Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural

$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—

$80.00 to $120.00 per ton, set.

Stone—

Granite, average, $6.50 cu. foot in place.
Sandstone, average Blue, $4.00. Boise $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner center and around sides will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc.— (See Dealers)

Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—

40c per square foot and up. Installation extra.

SAN FRANCISCO BUILDING TRADES WAGE SCALES

All crafts 8 hour day (except as otherwise noted) and 5 day week. Effective as of May 1, 1940.

CRAFT	Journeymen Mechanics
Asbestos Workers	$10.00
*Bricklayers	10.50
*Bricklayers' Hodcarriers	7.50
Cabinet Workers (outside)	10.00
Caisson Workers (Open)	8.80
Carpenters	10.00
Cement Finishers	10.00
Electricians	11.00
Elevator Constructors	12.00
Engineers (Portable and Hoisting)	10.00
Glass Workers	9.68
‡Housesmiths, Ornamental Iron (Shop and Outside)	10.00
Housesmiths, Reinf. or Rodmen	10.50
Ironworkers (Bridge and Structural—Engineers)	12.80
Laborers (Building and Common)	6.50
*Lathers	9.60
Marble Setters	10.50
Millwrights	10.00
Mosaic and Terrazzo Workers	8.00
†Painters	8.75
Pile Drivers and Wharf Builders	11.20
Pile Drivers Engineers	12.80
*Plasterers	10.00
*Plasterers (Hodcarriers)	8.40
Plumbers	11.20
Roofers	10.00
Sheet Metal Workers	10.00
Sprinkler Fitters	11.00
Steamfitters	11.00
Stair Builders	10.00
Stone Cutters	9.00
*Stone Setters	10.50
Tile Setters	11.00
Welders, Structural Steel Frame on Buildings	12.80
§Dump Truck Drivers, 2 yards or less	7.00
§Dump Truck Drivers, 3 yards	7.50
§Dump Truck Drivers, 4 yards	8.00
§Dump Truck Drivers, 5 yards	8.00
§Dump Truck Drivers, 6 yards	8.50
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	8.00
3 yards	8.57
4 and 5 yards	9.14
6 yards	9.71

EXPLANATION:

*—6 Hour Day.

†—7 Hour Day.

‡—Term "Architectural Iron" no longer used. This craft "Ornamental Ironworker."

§—Dump Truck Drivers work 7 HOURS ON PUBLIC WORK, 8 HOURS ON PRIVATE WORK; starting time 7:30 A.M.

NEW DEVELOPMENTS IN BUILDING PRODUCTS
APPROVED BY PRODUCERS' COUNCIL

STRUCTURAL clay tile especially suited to defense construction, an upward acting garage door set, a modern wiring system for low cost dwellings and farm out-buildings, and newly designed bathtubs of ceramic material, are among the building products described in the last bulletin of the Producers' Council, edited by the Department of Technical Services of the American Institute of Architects.

When structural clay tile is used, construction time is not required for plastering, painting, or other wall finishes, because the tile functions as both structural wall material and surface finish of the building, it is pointed out. The exterior faces are textured, while the interior faces are smooth. The tile has strength, low maintenance cost, and good resistance to weathering and fire. It has been used in the National Guard Armory, Hot Springs, Ark.

The new bathtub, designed with flat bottom and a panel front, has a hard glass-like surface that is easy to clean. A comfortable seat extends across the front of the bath, a splash rim keeps water from surging over, and a hand grip provides greater safety in getting in and out of the tub. Although the bottom is flat to reduce danger of slipping, a pitch toward the outlet assures overall rapid draining.

"The tub will not be stained by sulfur or iron deposits in water, is unaffected by ordinary household acids, and is highly resistant to ordinary scratching and abrasion," the bulletin says. "It also has the ability to resist thermal shock."

* * *

Modern garage hardware for the house, built on a limited budget, slides the garage door up out of the way. It can be applied to old doors, converting them into a one-piece upward acting door. The doors can be fitted snugly all around, completely sealing the opening when closed. The installation is called simple and speedy. The hardware includes all necessary parts, with locking device designed for use with a padlock.

Doors are counterbalanced by a weight box regularly located at the side wall, or with special cables it can be placed at the rear of the garage. Connection between weight box and door is by means of aircraft cables, operating over roller bearing pulleys.

* * *

The current increase in low-cost residential construction and the extension of electrification to rural areas have created a demand for a wiring system which is safe, simple and flexible, yet adequate, economical, and modern in appearance, according to the bulletin. A porcelain insulated wiring system is described which is recognized by the National Electrical Code as a safe wiring method. Parts for the system are few, versatile, and readily procurable in rural and urban districts, while the cost is low, it is stated.

The electric current is conducted through insulated wire, supported on porcelain insulators from point of entrance to the building to the place of utilization, where a terminal device is mounted in and protected by porcelain boxes. The open nature of this wiring method enables it to endure flood conditions without harmful effects. The wiring itself is practically immune to water damages; the only parts likely to be affected are the terminal devices, and those are readily inspected and replaced if necessary without disturbing the wiring itself.

* * *

For multiple kitchens for apartments or housing projects, kitchen units including steel base cabinets with Monel work surfaces, steel wall cabinets, and Monel sinks are advocated. "Monel is a solid, silvery, strong-as-steel, rustproof metal, smooth and non-absorbent, which makes work surfaces easy to keep clean, requires no refinishing, does not chip, crack, or permanently stain," it is pointed out.

"The finish on the steel cabinets is baked synthetic enamel, which is also easy to keep in perfect condition. The cabinets are well built of furniture steel, welded construction, sound deadened, employing drawer checks and rubber bumpers.

"The sinks and white synthetic enamel finished base and wall cabinets are of a simple, modern, design harmonizing with any decorative scheme, all matching perfectly, making a cheerful, bright, sanitary kitchen. The units are designed to give the maximum working surface and storage space per square foot of space occupied. This is most important in planning small homes."

* * *

In what is called a "distinctive new ceiling construction," today's best methods of lighting and sound control are applied. Fluorescent lighting units are recessed in a ceiling composed of a perforated metal facing backed up with a rock wool sound absorbing pad. The ceiling has a noise reduction co-efficient of 85 per cent.

"Entirely mineral in composition, the ceiling construction is incombustible," the bulletin says. "Its triple-enameled, triple-baked surface is non-porous and dirt-repelling, and it may be easily cleaned with either a damp cloth or sponge. It can be readily painted without impairing its sound-absorbing efficiency.

(Turn to age 65)

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

506. BUILT-IN FIXTURES

Paramount Built-In Fixture Company have a new folder of information, (fully illustrated), on their "Modern Kitchens." This pamphlet is most attractive and shows the new departure in stream-lined kitchen equipment. Send for your copy.

507. SLIDING GRILLES

From the Cornell Iron Works, a newcomer to this page, we have received a brochure which illustrates their sliding grilles, an interesting protective grille for displays, garages or markets. The coupon will bring your copy.

508. LADDERS

An interesting little booklet has just been received which is put out by the Aluminum Ladder Company. Here we find illustrated, ladders and gangways for many uses. Ordinary step-ladders, ladders for mounting into planes, gangways for ship to shore side, and many others. Send for a copy.

509. PAINT

National Chemical and Manufacturing Company have a folder on "Luminal" Paint which gives some interesting features and has a table of color schemes and combinations. It is claimed that this paint has no odor and drys in forty minutes. Use the coupon.

510. CULVERTS

Koppers Company (Wood Preserving Division) have put out a broadside which illustrates their Pressure Cresoted Laminex Culverts. These culverts, according to the information, are laminated and interlocking. Specifications are included in the broadside.

511. TILE

Double-thick Fibre Tile is the subject of a brochure issued by the Upson Company. Quite appliable to kitchens or bathrooms, bars or play rooms, this product seems to be a ready answer to some of the homeowner's problems. The coupon will bring you a copy.

512. COATINGS

American Concrete and Steel Pipe Company have just put out a very fine booklet on corrosion proof non-contaminating coatings. The booklet contains text and illustrations and specifications.

513. HEATERS

A new catalog No. U-41, issued by Reznor Manufacturing Company, gives latest details on gas fired suspended unit heaters for industrial, commercial and domestic use. Some very interesting details will be found in this catalog.

614. PLASTICS

The Monsanto Chemical Company have some interesting data and photographs illustrative of their plastics and uses for them in modern architecture. These appear to be plastics in the form of tiles and should be of interest particularly in the treatment of certain interiors. Send for this data.

515. SCREENS

Ingersoll Steel & Disc Division of the Borg-Warner Corporation have issued another of those interesting booklets on "KoolShade" sun screens. This particular one is entitled "data on the reduction of the solar load." The data herein contained is most interesting. The coupon will bring you a copy.

516. FOR POWER PLANTS

Data on instruments and controls for power plants—steam—is contained in a folder put out by the Hays Corporation. A long list of the representatives of this corporation is included.

517. CAST IRON

International Nickel Company has a little booklet on Nickel Cast Iron. The booklet is in the form of a small magazine and has much of interest in its twelve pages. Send for a copy by using the coupon.

518. FINISH COAT PAINT

Porce-Tite Products, manufactured by the Bedard & Morency Mill Company, are described in separate sheets attached. A color chart is included. This company produces its product in several different sized containers and prices are quoted.

519. NEW ELECTRIC HEATER

Wesix Electric Heater Company have put out a late broadside on a new small portable electric room heater. All available data is given and a table of operating costs together with a full description. Use the coupon to have a copy sent to you.

FREE FOR THE ASKING

Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

Architect and Engineer
68 Post Street
San Francisco, Calif.

Please send me literature on the follo
items as checked below. This re
places me under no obligation.

506 ☐	513 ☐
507 ☐	514 ☐
508 ☐	515 ☐
509 ☐	516 ☐
510 ☐	517 ☐
511 ☐	518 ☐
512 ☐	519 ☐

My Name.....

Name of Company.....

Street.....

City.....State.....

NEW BUILDING PRODUCTS

(Continued from Page 63)

"The fluorescent lighting assures a uniform light—direct, yet free from glare and with virtually complete elimination of shadows. It provides more illumination from the same wattage and, of particular importance in air-conditioned areas, produces two-thirds less heat than ordinary lighting methods."

* * *

Boilers and furnaces to meet widely varying requirements, budget limitations, and personal preferences are also available, it is declared. The choice includes those for coal, coke, oil or gas burning; for steam, hot water, or warm air heating; and for manual, semi-automatic, or fully automatic firing.

* * *

A suggested protection against termites is prefabricated form ties for use in the construction of concrete walls. The ties, which prevent development of any avenue for termites, also give a true size of concrete wall, permit straight wall-work, tight anchorage of studs for finished basements, and are less expensive than wire ties and wooden spreaders, according to the bulletin.

BUILDING A HOME OVER THE RADIO

Building a home, dramatized with all its thrilling progressions, is a Friday night KGO radio attraction that is making friends for the architectural profession. The serial is sponsored by Baldwin and Howell and will continue weekly until completion of a model home for the Edwards Family in Westwood Highlands. Al Roller and R. I. Stringham are the architects who are heard in the drama.

The first program found the Edwards family discussing their present home. Naturally there are things the matter with the place. They have outgrown it and it lacks many of the modern improvements and facilities they all want.

Architect Roller enters the picture, explains how they can have exactly the kind of house they have dreamed of for years and tells them of an ideal site where California architecture could be fitted to the hillside setting in perfect harmony.

Enthusiasm ran high and the second broadcast found the family and architects inspecting the proposed location with W. P. Laufenberg, secretary and general manager of Baldwin and Howell. They decide to go ahead with the improvement and to call their home "The KGO House."

Then comes the interesting sequence of planning the building, of studying every detail from all possible angles, and working out the home that will be the dream castle for the Edwards family during the years to come.

After construction gets started, a second series of broadcasts will originate from the property and will be heard over KGO at 3 p.m. Sundays. These will feature the observations and conversations of the family with the architects. The public will be invited to see these Sunday programs presented and to remain for a general conversation with the architects and the Five Edwards after the broadcasts have signed off.

PLANS FOR HEATING EXPOSITION

Plans for the Pacific Heating & Air Conditioning Exposition are progressing, according to a recent report from the exposition management. Scheduled for Exposition Auditorium, San Francisco, June 16-20, this will be the largest event of its kind ever held on the Coast.

Up to January 1st 70 leading manufacturers had engaged more than 50% of the exhibit space in the main auditorium, and the remaining spaces are under active consideration.

This exposition will present a summary of the latest available equipment for heating, ventilating and air conditioning. It will be of particular interest to builders, contractors, engineers and operating men, industrial and commercial building owners and operators, home owners, architects, designers, dealers and distributors.

Included among the exhibits will be interesting displays of air conditioning equipment, boilers and furnaces, fans and blowers, control apparatus, registers and grilles, pumps, oil burners, insulation material, piping, unit heaters, steam traps, steam specialties, radiators, etc.

The American Society of Heating & Ventilating Engineers, who are sponsoring the event, will hold its annual summer meeting during the same week. Also meeting at this time will be the Heating, Piping & Air Conditioning Contractors National Association.

The exposition is managed by International Exposition Co., which conducts the biennial International Heating & Ventilating Exposition. Permanent headquarters are at Grand Central Palace, New York.

WESTINGHOUSE APPOINTMENTS

William B. Bustard, of Los Angeles, has been placed in charge of San Diego area sales activities for the Westinghouse Electric & Manufacturing Co., according to an announcement by Charles A. Dostal of San Francisco, Pacific Coast District manager for the company.

Mr. Bustard will succeed Ronald T. Strong, of San Diego, who has been called to active duty with the U. S. Navy. A Lieutenant Commander, Mr. Strong has been in command of the First Battalion, Organized Reserves. On returning to active duty, he will be attached to the Material Office of the Eleventh Naval District in San Diego.

A native of Memphis, Tenn., Mr. Bustard has been associated with Westinghouse since his graduation from the University of Southern California in 1926 as a Bachelor of Science in Electrical Engineering.

Mr. Strong is a native of Portland, Ore., and a graduate of the University of California, Berkeley, where he received his electrical engineering degree in 1914. He saw active service with the Navy from 1917 to 1919 in the Caribbean Sea and other South and Central American waters.

NORTHERN CALIFORNIA CHAPTER

The annual meeting of Northern California Chapter, A.I.A., was held at the St. Francis Yacht Club in San Francisco, Tuesday, January 28, President James H. Mitchell presiding.

Members present: Messrs. Wm. Clement Ambrose, A. Appleton, G. Frederic Ashley, E. Geoffrey Bangs, Ernest Born, Mario J. Ciampi, Hervey P. Clark, Mark Daniels, Albert J. Evers, Edward R. French, Jr., Irvin William Goldstine, J. S. Gould, Henry H. Gutterson, Andrew Hass, Wayne S. Hertzka, Lester Hurd, Ellsworth E. Johnson, Irwin M. Johnson, Ralph N. Kerr, A. Lewis Koue, Lawrence A. Kruse, John B. McCool, Leffler B. Miller, James H. Mitchell, Keith O. Narbett, Gwynn Officer, Warren C. Perry, Timothy Pflueger, Ralph N. Pollack, Vincent G. Raney, Frederick H. Reimers, Malcolm D. Reynolds, Albert F. Roller, Eldridge T. Spencer, Roland I. Stringham, Wesley A. Talley, Clyde F. Trudell, Ernest E. Weihe, Alfred C. Williams, Wm. Wilson Wurster, John Davis Young.

Guests Present: Messrs. J. Francis Ward, President of the San Francisco Federation of Arts; Clarence Mayhew, President of the San Francisco Society of Architects, and Raymond H. Brown, President of the Producers' Council Club.

Mr. Mitchell introduced the guests for the evening, and also introduced Mr. Reimers, newly elected President of the State Association of California Architects.

Mr. Mitchell, in his address as retiring president, briefly reviewed the activities of the Chapter during the past year.

The Secretary-Treasurer's report on the status of Chapter affairs and membership was approved, subject to audit.

By a unanimous vote, the reports of the various standing committees were accepted. These listed the progress made in the various activities and organizations in which the Chapter participates.

The appointment of Gwynn Officer as chairman of a committee to follow through to completion the work of coordinating the State Chamber of Commerce Building Code with the Uniform Building Code was announced. Messrs. Hass and Hurd were named to assist Mr. Officer.

Reports of the Chapter Delegates to allied organizations were also unanimously accepted.

By acclamation, a rising vote of thanks was tendered Mr. Mitchell, the retiring president, in appreciation of his many years of unselfish service to the Chapter.

—J. D. Y.

SCHOOL BUILDING PROBLEMS

Twelfth annual conference of the National Advisory Council on School Building Problems will be held in Atlantic City, N. J., in the club room of the Hotel Ambassador, Saturday, February 22.

One of the topics will be a discussion of "How Shall We Plan Rooms for the Different Activities in the Modernized Community High School?" This subject has been chosen because of the many requests for detailed information on the planning and designing of rooms for the variety of activities in the modern high school which are necessary in order to meet the needs of high-school students, out-of-school youth, and adults. At the luncheon and afternoon session there will be a panel discussion of the important subject "The Problem of Schoolhousing in the Present Emergency."

"THE FINE ARTS IN AMERICA"

A competition for the best essay on "The Fine Arts in America" is announced by The Atlantic Monthly in association with the American Institute of Architects. The prize is $1,000. The program:

Length

Not less than 2,000 or more than 5,000 words.

Time

Typed manuscripts must be submitted to the offices of the Atlantic Monthly, 8 Arlington Street, Boston, on or before April 1, 1941.

Prize

A first prize of $1,000 will be awarded to the author of the best essay, and a second prize of $500 to the runner-up. These awards have been made possible thanks to the generosity of the Waid Education Fund of the American Institute of Architects.

Judges

The essays will be judged by a committee consisting of William Emerson, Dean of the School of Architecture of the Massachusetts Institute of Technology and Professor Emeritus since 1939; Francis Henry Taylor, Director of the Metropolitan Museum of New York, and Edward Weeks, editor of the Atlantic Monthly.

The judges reserve the right to reject any or all of the manuscripts, but it is their hope that the prize-winning essays will be available for publication.

Topic

It is the intention of the donors to emphasize the importance of the Fine Arts in America, to encourage the recognition of an interdependence between Architecture and the Fine Arts. They do not wish the competitors to limit the scope of their papers to sectionalism or to indulge in speculation about the Art of the Future. By way of stimulus, the following topics are set forth as being worthy of serious consideration:

American Art and the European Tradition
Art and Laissez-Faire vs. Art in a Planned Society
Art in Everyday Life
Education of Public Taste
The Effect of Georgraphy and Race on American Art or Architecture
Should the State Subsidize the Artist?
Art in a Democratic Society
The Education of the American Artist
The Development of a National Art
The Education of the American Patron.

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"WITH HAMMER AND TONGS"

Spanish ornamental ironwork, Italian altar lamps, old French cooking molds, Navajo and Alaskan Indian jewelry, and modern American sculpture are among more than 250 examples of the adaptability of malleable metals to creative design which are on display in a public exhibition at the Cooper Union Museum for the Arts of Decoration in New York.

Spanning thirty centuries, the exhibit, which is entitled "With Hammer and Tongs," demonstrates how craftsmen through the ages have found an inspiring medium of expression in the malleability, or capacity to be shaped by hammering or pressing, characteristic of gold, silver, copper, brass, wrought iron, tin, pewter, and lead. Distinction is drawn between casting, in which the metal is reduced to a molten state and poured into a mold, and the more difficult art of making the metal "flow" by pressing and beating it.

American, European, and Oriental craftsmanship is shown in a variety of objects, ranging from iron gates hammered out by blacksmiths to gold watch cases delicately decorated in repoussé design, in which the pattern is pressed up from the reverse side. Representative pieces from Cooper Union's extensive collection of metalwork are supplemented by material loaned by the American Museum of Natural History, the Museum of Modern Art, the Newark Museum, the American Numismatic Society, and seventeen private galleries and collections in New York.

Gold, most malleable of all metals, has stimulated artists since earliest recorded times. A single grain of this metal can be hammered into a sheet fifty-six square inches in area and to a thinness of 1/280,000th part of an inch, at which point it transmits light. Gold leaf, samples of which are included in the exhibit, is still worked by the same process perfected more than 2,000 years ago. It is hammered between alternate layers of leather prepared from the outer membrane of an ox's intestine.

The outstanding gold object on display is an Egypto-Phoenician necklace of the tenth century, B. C., fashioned of delicately braided strips of beaten gold and decorated with a stylized lotus flower, also of gold. Other articles of gold are Japanese sword guards and menuki, eighteenth and nineteenth century English and American buttons, a nineteenth century Mexican medal, brooches, watch cases, and chains.

Shown also are textiles woven in Italy in the fourteenth century, the threads of which were procured by tanning leather from the embryo of a calf, covering it with a thin coat of gold leaf, and cutting it into fine strips. These strips are woven with other threads of linen and silk. Similarly, there are Japanese textiles in which the gold leaf was applied to paper and then woven, and Gothic brocaded velvet, the patterns of which are worked into the material in gold and silver threads.

The skill of the silversmiths is displayed in many

pieces, the most unusual of which is a Mexican presentation ornament of silver in the form of a globe suspended between two pillars which is inscribed "to the Liberator of the Country, to the Founder of the Empire, to the Unconquerable Augustin I, counsel of State, August, 1823". The globe bears the portrait of Augustin Iturbide, self-styled first emperor of Mexico.

An Italian silver wall plaque, dating from the 1730's and depicting a gracefully wrought cherub holding a hanging cup on a silver chain, is among the many silver objects on view. Others include an early example of Kirk silverware from Baltimore, a tea caddy, bowls, and filigree articles, comprising jewelry and toys in the form of miniature tables, a galleon, a mandolin, a gondola, and a sewing machine.

WROUGHT IRON TECHNIQUE

A large part of the exhibit is devoted to work in wrought iron, which is extremely pure iron with only a small percentage of imperfections. The remarkably high degree of skill attained by European craftsmen in this medium is typified by elaborate nailheads or bosses used decoratively on the outer doors of Spanish buildings, and a variety of keyhole escutcheons, of sixteenth century origin, and by brackets, window grilles and balcony railings from the early eighteenth century.

Representative of the deep creative feeling which the Spanish achieved while working with the most common of all metals is an iron window grille, probably made around 1800, which had an important social function. The grille stood as a barrier between an unmarried girl and her lover during early courtship. At no time before a formal engagement was announced could the man enter the same room with the girl, and a duenna was always on hand to limit the range of conversation.

Italian ornamental ironworkers of the nineteenth century, when nearly every large estate was surrounded by ornate fences, often built models of proposed fences and gates for their client's approval, before beginning actual construction. One of these, a model seven feet in length of the entrance to the Villa Pisana at Stra, which was built in 1807 and bought by Napoleon I for Eugene Beauharnais, is exhibited.

Other examples of outdoor decorations are an iron gate to a burial vault chapel, from Nancy, France, in the style of the Louis XV period; foliatures and scrolls from the garden gate of the Palace at Versailles; several sections of eighteenth century French railings, and another from a rail by the late Samuel Yellin, famous American metal worker. There are also original drawings for gates and balconies of French government buildings.

The oldest piece of wrought iron in the exhibit is a pair of Greman finials dating about 1525. From France is an iron overdoor from the Chateau of Chantilly, about 1640, and from Italy a pair of candelabra painted and mounted with brass from the Church of San Zeno at Verona, 1880. Chinese art is represented

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by flower forms of wrought iron from the Tao Kuang period (1821-1850), minutely fashioned and including crabs, katydids, and other small life.

ECCLESIASTICAL CRAFTSMANSHIP

Ecclesiastical pieces form an important part of the display. There are several altar lamps of silver and brass and one of copper-gilt, in Italian baroque style, decorated with repoussé silver in the shape of acanthus leaves, shellwork, laurel, and the heads of cupids. Another item is a four-foot German wrought-iron cross.

From the Victorian period in America are a pair of tin slippers and a realistic bouquet of tin flowers of unusually fine craftsmanship, designed in New York in 1889 as a tenth anniversary wedding gift.

A section of the exhibit near the entrance constitutes a visual definition of the term malleability. A series of working drawings illustrate twenty-seven steps in the forming of a copper chalice, and with the drawings seven chalices in progressive stages of completion are presented. An assortment of tools used in hammering out metals is also shown.

A complete set of early nineteenth century copper molds from Normandy, which were intended for preparing cheese and gelatin dishes in the shape of lobsters, fish, dolphins, ducks, clog shoes, and turtles are on view. Another type of food vessel is illustrated by a set of four hammered-brass Germain platters, twenty-four inches in diameter, made in Nuremberg in the seventeenth century.

Outstanding pieces from the field of sculpture are "The Picador" in wrought iron by Pablo Gargallo, and "Saturnia", a feminine figure by Jose de Creeft, which was hammered from a thick sheet of lead.

Buttons typical of the eighteenth and nineteenth centuries in France, Germany, Spain, Holland, England, and the United States, have been selected from Cooper Union's world collection. They are hand made and emphasize the malleability of gold and silver. Some of the later examples were made by pressing the metal with engraved dies, a principle of production which today is universally used in large-scale manufacturing processes.

RUNNING FIRE

(Continued from Page 1)

• *STILL ON*

Shortly after the 1918 armistice was signed my outfit organized a small club. In New York a few weeks ago they had a meeting at which a resolution was introduced that caused some bitter feeling. I was not there, but was told no final vote was cast because while the vote was being taken, VIVE VOCE, the secretary, forgetting the armistice had been signed, knocked the president out of his chair. Must have socked him between the ayes and noes.

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COULEE DAM NEARLY COMPLETED

As cold weather compels the cessation of concrete placement at Grand Coulee Dam, the hugest masonry structure in the world stands virtually completed

The concrete placed in the dam since 1934 when pouring began totals 10,453,000 cubic yards or about 21 million tons—three times as much masonry as ever went into a single structure within the history of man.

A long, straight slab of concrete over 30 stories high and 500 feet thick at the base now stretches three-quarters of a mile between the hills that stand on each side of the Columbia River.

When concrete placement is resumed this spring the major work will consist of putting the finishing touches on the dam and the west powerhouse.

Workmen have been removing machinery and are dismantling the mammoth concrete mixing plant that last year broke all world's records for the production of concrete. In May last year it turned out 20,684 cubic yards or more than 40,000 tons of concrete in a single day, 29 tons every minute.

Activity continues apace at the dam, however, despite the interruption in concrete pouring because of freezing weather. The installation of electrical equipment for the dam's great power plant—capacity 2,700,000 horsepower or 1,944,000 kilowatts, by far the largest in the world—is being pushed with all possible speed.

Two station unit generators of 14,000 horsepower or 10,000 kilowatt capacity each are the first units to go into the big plant. They are expected to be in operation in a few months. They will be followed by the first of the giant generating units with a capacity of 150,000 horsepower or 108,000 kilowatts. Completion of installation of the first unit is scheduled for July.

Meanwhile work is going ahead on the installation of the 11 drum gates along the crest of the dam's 1,650-foot overflow spillway. The huge gates are the steel barriers that will control the flow of the river over the dam. More than 9 miles of heating cable

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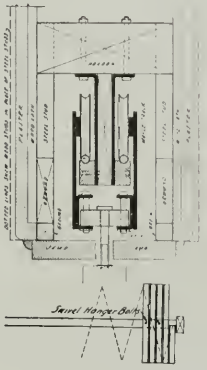

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and an acre of steel plates are also being placed along the spillway to prevent the gates from freezing to the spillway piers during cold months.

The million-dollar job of relocating 39 miles of the Great Northern Railroad is also going ahead with the construction of highway and railroad bridges and other necessary structures such as trestles, underpasses and culverts. About 75 miles of State and County highway have been completed.

At the dam itself men are busy painting the metalwork in the galleries of the dam, welding filler strips in the slip joint seams of the outlet conduits, and sandblasting and painting the penstock interior surfaces at the west powerhouse. Cooling coils no longer needed for concrete cooling are being grouted, while routine cooling is being continued in sections of the abutments, the spillway and the pumping plant.

FREE MOVIES BY CRANE CO.

A general interest sound moving picture entitled, "The Making of American Homes," has recently been released by Crane Co.

This picture is of about 30 minutes running time, and illustrates in a graphic and very interesting manner the importance of modern plumbing in making the American home the most attractive and comfortable in the world. Not only is the audience taken into the homes of two typical American families confronted by building and remodeling problems, but, also, the actual manufacture of fine plumbing fixtures is illustrated and described in an entertaining and understandable manner. The making of fixtures from vitreous china and porcelain enamel on cast iron is covered from raw materials to finished product and the final sequences of the film are in full color.

"The Making of American Homes" is available to interested groups on a loan basis at no cost other than the nominal shipping charges on the copies borrowed. It can be shown on any standard 16 mm. sound projection machine, and will be found of unusual interest to school, club, church, civic and other groups of the general pub-

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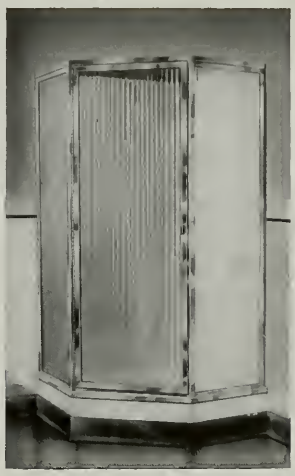
SAFERIZED PALCO WOOL

A new "Saferized" flame-proof process for treating the redwood bark fibres from which Palco Wool insulation is made has been announced by the Pacific Lumber Company, San Francisco. The new process, according to Edric E. Brown, manager of the insulation division, augments the inherent fire-resistant qualities of the bark of the redwoods, which have withstood the ravages of fire and nature for centuries, to become the world's oldest living things. It is expected to meet the most exacting requirements for flame-proof materials.

Blow-torch tests to which the new Saferized Palco Wool has been subjected show most satisfactory results, Brown stated. "When a sample is held in the hand and the flame blown directly into it, no fire results when the torch is removed."

That the new Saferized process will prove a definitely favorable factor in increasing the sales of Palco Wool is indicated by the enthusiastic reaction from dealers and distributors throughout the nation, Brown pointed out. "One of our distributors has already placed commitments for 1941 based on an anticipated volume double that which he sold in 1940."

Palco Wool was first generally introduced to the trade a decade ago when research engineers of the Pacific Lumber Company perfected a process for removing the wiry resilient fibres of redwood bark from the solids in which nature had imbedded them. Its success since that time has been one of the romances of American industry. First adopted by the cold storage industry, its use has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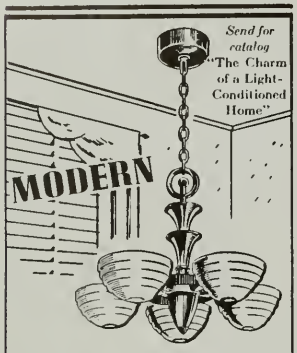
Seattle, Wash. . White-Henry-Stuart Bldg.



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spread rapidly to the domestic field, one community alone, the Twin Cities, having installed it in over 300 houses during the past year, according to reports from dealers.

The installation of Palco Wool as a fill insulation has been greatly facilitated by the recent developments in mechanical application. A new blowing machine has been perfected which transports the material from the point of unloading to the point of application and at the same time automatically fluffs it uniformly for maximum efficiency and economical installation. Where the blower-applicator is not used, an electric fluffing machine is available for expanding the material from compressed bales for uniform application.

U. S. GOOD PLACE TO STUDY

(S. F. Chronicle)

For reasons too clear to need to be stated the American Academy in Rome announces that it will send no fellows to Rome for study this year and therefore will award no fellowships this spring. Instead, the Academy will use its money in this country for a series of special prize competitions in the arts and for two scholarships in classical studies in American universities.

The Academy will offer a cash prize of $1,000 in each of the arts of architecture, landscape architecture, musical composition, painting and sculpture. Each of the two scholarships will also pay $1,000 for the year.

It may be a disappointment to some that the Academy now has to break its practice of choosing and sending to Rome fellows who study the arts at its expense. Rome is considered a good place for such studies. Yet this change, due to circumstances over which the Academy has no control, may have some excellent aspects of its own. It may result in some persons finding out that the United States itself is a good place to study the arts. We have here in this country excellent practitioners of all the arts the Academy takes into its view. In some of them we have topnotch practitioners. We have excellent teachers; in fact, we imagine a student can find in the United States as good a teacher in any of these arts as is to be found in Rome.

The advantages of study in the art centers of Europe are admitted. At the same time we believe it has been many years since it was all-important for a student of the arts to have the finishing touches put on in Rome or Paris. The notion that it is has remained a fetish long since ceased to be a fact.

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THE STEEL INDUSTRY
by Irving S. Olds

DURING recent months, the outstanding characteristic of the steel industry has been the consistently high rate of operations, ranging from around 70% of rated ingot capacity in the first quarter of 1940 to more than 90% in the last quarter, with an average ingot production for the year slightly in excess of 80% of rated capacity. This country produced more steel in 1940 than in any previous year, exceeding the production of the record year of 1929 by a considerable amount.

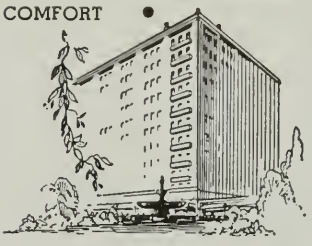
After the low rates at which the steel industry has operated almost continuously since 1930, it is gratifying to witness such a substantial realization of this basic industry's vast resources, both in equipment and manpower, but it must not be overlooked that the causes are transitory, tracing back to the war in Europe and to generally disturbed conditions in the world, and that readjustments will follow when a more peaceful day is reached.

Some commentators outside of the steel industry have questioned the adequacy of existing steel capacity to take care of demands during the present emergency. To date, the nation's defense effort has not been delayed by any shortage of steel and no such delays from that cause are anticipated by the industry.

Present ingot capacity of the industry is about 60% greater than the peak production in 1917—during the World War—and approximately 30% greater than the ingot production of the record year of 1929.

The subsidiaries of United States Steel Corporation are now engaged in the execution of a carefully considered program of plant improvement and extension. Expenditures of such subsidiaries during 1940 for improvements and extensions aggregated approximately $80,000,000, and at December 31, 1940, the unexpended balance on authorizations for this program amounts to approximately $155,000,000. Other steel companies have announced plans for substantial improvements and extensions in their facilities.

COMFORT •



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Extensive facilities have been or are now being installed at certain plants of subsidiaries of United States Steel Corporation for the production of heavy and light armor plate, shell forgings, and unloaded shells and bombs in order that these subsidiaries may perform contracts undertaken in connection with the national defense program.

We start the new year with a deep sense of responsibility. The proper utilization of the great energies and resources of the country can be attained only by the sustained and coordinated efforts of all in willing obedience to the obligation to make the public interest and public need paramount to all other interests and aims. United States Steel considers itself prepared to fulfill its part in this great national undertaking.

THE 1940 HOUSING CENSUS

According to preliminary counts released by the Bureau of the Census, there were 37,211,463 dwelling units in the United States on April 1, 1940. This total includes farm as well as nonfarm units and comprises both occupied and unoccupied dwellings.

During the past decade the number of private households increased from 29,904,663 to 34,772,673, or approximately 16.3 per cent. This increase is considerably more than the 7.0 per cent gain in total population between 1930 and 1940. The average number of persons per household in 1940 was 3.8 for the United States as a whole, as compared with an average of 4.1 in 1930. More than half of the increase in the number of families during the decade was thus due to a decline in the family size and less than half to population increase, the Census Bureau states.

ZIEGFELD GIRL COMPETITIONS

(Continued from Page 9)

The winners will be awarded the following prizes: First prize, $500; Second prize, $200; Third prize, $100; Next four, $50 each.

Contestants may submit paintings or drawings in any medium—pastel, oils, water color, or black and white. Entries must be in the hands of the judging committee prior to midnight, March 17, 1941. All paintings or drawings are to be plainly marked with contestant's name and address on the back and mailed to: Ziegfeld Girl of 1941 Contest, Room 1503, 1540 Broadway, N. Y. C.

TO EXTEND C. C. CANAL

Irrigation of an area of orchards and field crops in the vicinity of Concord and Walnut Creek is contemplated from a new section of the Contra Costa Canal to be constructed under a contract for which eight bids have been received by the United States Bureau of Reclamation.

The lowest bid was $213,502 submitted by Trewhitt-Shields & Fisher of Fresno. Second low was $214,622.50 by Clyde W. Wood, Los Angeles, and third was $215,767.54 by Loveland & Co., Ltd., San Francisco.

The job involves building an additional 8½ miles of the Contra Costa Canal to the crossing of Walnut Creek north of the town of that name. The first 29 miles of the canal have been completed as far as a point northeast of Concord. The new section will have a capacity diminishing along its length from 172 second-feet to 125 second-feet. The initial capacity of the canal at the head end is 350 second-feet.

With the first 20 miles of the canal in operation, initial irrigation under the Central Valley Project has been started from it for the benefit of several farms in the vicinity of Oakley. Earlier canal customers were the City of Pittsburg taking domestic water and the Columbia Steel Company using industrial water.

BETTER EACH MONTH

A Los Angeles landscape architect writes: "I must congratulate you upon the splendid advance you are making with the magazine. Each month it seems better."

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ENGINEER

MARCH
1941

William Wilson Wurster

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RUNNING FIRE

By MARK DANIELS

• *ALL THINGS CONSIDERED*

Perhaps it is just as well. The Government is rapidly taking the work from the practicing architect and throwing it into the bureau pots. The War and Navy departments are doing more and more of their own architecture. Despite laws and regulations to the contrary, the contractors are doing more designing of their own structures. The State of California, having taken the state school work from the practicing architects, is now planning to take the county work into their bureau. What little work is left has been brought to a standstill by the deluge of rain that has been falling since the days of architectural activity, which seems to be a time that passeth the memory of man.

But all things considered it may be just as well, for many architects are coming later to their work and going home earlier. Some have even got so they can sleep as well at home as they can in the office.

• *T. L. M.*

With every step, water squinched from the over-run shoes of The Little Man as he waddled down the short corridor of the Maiden Lane entrance, and streamed from the sodden sleeves he was rolling back to keep the water from dripping into my old fashion which he said he mistook for an hors d'oeuvre, and swallowed quickly.

"Noah," he said, closely watching Al stir two old fashions, "built the Ark of gopher wood, which assured him of at least two passengers that would not be crabbing before the trip was over. Snellius computed the area of the Ark to have been over one-half an acre. Arbuthnot claims it had 81,000 square feet. Neither one of these authorities stated whether their figures included the poop deck. In 1771 the Encyclopaedia Britanica printed an enlightening account of the problems involved in the design and construction of the Ark. Since that time they have added nothing to the subject, which same is true of most of the other articles in that publication. In Genesis the Israelite version of the flood, which varies from the Babylonian version, claims that the animals came two by two, which is not true. They came in droves, but only two of each kind were admitted. The others got rain checks. We are now confronted with another deluge and are, but for one circumstance, better able to cope with the problem than was Noah. We have had the prescribed forty days and forty nights of rain, and then some, but we don't need a half acre of deck space because we can cut down on the space needed for food storage by the scientific use of vitamins. Never-the-less, much as we need an Ark, we have arrived at an impasse for we can find no gopher wood or any other kind of wood that is not already water-logged." Saying which The Little Man poured the water from his rain-soaked hat into his own empty glass, drained mine at a gulp and sloshed to the door. Al stood akimbo until I held up one finger.

• *RADIO JARGON*

"You cannot be without it. Its wholesome goodness, its proven superbness and perfect liquidness will keep you in glorious health. No acidness, only pure drinkableness packed full of agreeableness. At three cents a day you cannot afford to be without it for, at the price, it's so jam full of savingness."

That may be some form of English but I call it sheer insaneness.

• *HEARD AT A ROADHOUSE*

"Waiter, I'd like some sliced fresh peaches."
"Sorry, madam, but this is February."
"Oh, dear. Haven't you got just one?"
"Sorry, madam."
"Oh, Bill, I just love fresh peaches."
"So-da-I."
"I love apricots, too."
"So-da-I."
"And lamb chops. Don't you just love lamp chops, Bill?"
"Unhunh."
"Pork chops are better though, don't you think?"
"Ain't it the truth."
"What's the difference between lamb chops and mutton chops, Bill?"
"No difference, Sugar."
"I just love ham and eggs."
"So-da-I."
"With maybe a little bacon."
"You said it."
"An' a big cup of hot Java."
"Swell, kid, swell."
"Let's have some hot cakes. I just love hot cakes, Bill."
"So-da-I."
"With lotsa syrup, huh Bill?"
"Swell, kid, swell."
"An' a big cup of hot Java."
"Ata girl."

• *TRADE NAMES*

No doubt it is all "fair enough" but it does seem to me that the manufacturers or their advertising agents or both are carrying this practice of inventing trade names close to the realm of nonsense.

For a while the fad was to add "ola" to the name of your product: cakeola, cornola, rockola, woodola. And did the ad writers ride it! Then came the practice of phonetic spelling, now tops with the ad writers. Flo-lite, Hushkote, Rok-hesive, Noxit. The latest movement is to throw together any pair or more of vowels spelled phonetically, more or less regardless of whether or not the resulting word carries any meaning in relation to the commodity to be advertised. Would you guess that Windex is a glass-cleaning fluid?

(Turn to page 70)

ARCHITECT AND ENGINEER

Volume 144 *March, 1941* *Number 3*

William Wilson Wurster **16-51**
Joseph C. Johnson
The following works by Mr. Wurster are illustrated:
Yerba Buena Club
Summer House for Mr. and Mrs. Robert Green, Mt. Diablo, California
Martin & Overlach Nursery, San Francisco
House for Mrs. H. B. Harker, Mill Valley
Town House for Mr. and Mrs. Henry Doble, San Francisco
Decorative Arts Exhibit, G.G.I.E., 1939
Apartment and Garages for Miss Eleanor Gardner, Berkeley

Floyd B. Comstock
House for A. R. Trogden, Los Gatos
House for Miss C. P. Comstock, Castro Valley, California

Wm. Maxwell Rice and Frank de Witt
House for Frank deWitt, Oakland

Donn Emmons
Proposed Apartment and Garages

Frederick I. Langhorst
Ranch House Remodelling for Mr. and Mrs. Edward Dawes Meanor

What Price Architect's Failure to Track the Law . **52**

Architects Meet in Yosemite in May **53**

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NEXT MONTH

¶Recent developments in the Clay Products Industry will be featured in April. New and improved uses have been found for this centuries old material, and how the industry has met competition with the producers of other structural and decorative materials, will be told by experts and illustrated with outstanding examples.

¶The leading manufacturers of Clay Products on the Pacific Coast have cooperated wholeheartedly with the result that our readers should be able to derive from this number a wide range of information, technical and otherwise, of no inconsiderable practical value.

¶Irving F. Morrow, architect of San Francisco, and recognized as one of the West's ablest writers on architectural subjects, will act as feature editor of this number.

¶Another April feature will be the program of the first Pacific Coast Convention of the American Institute of Architects to be held in the Yosemite Valley, May 17-19th. In addition to the convention's activities in the Valley, there will be outstanding entertainment in Los Angeles, Santa Barbara and San Francisco.

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worked with Wurster in the creation of this masterpiece!

To the famous modern architect, William Wurster, goes the credit for designing the Yerba Buena Club. To W. & J. Sloane goes the credit for executing many of the interiors. Sloane is proud of its share in one of the outstanding examples of Mr. Wurster's genius.

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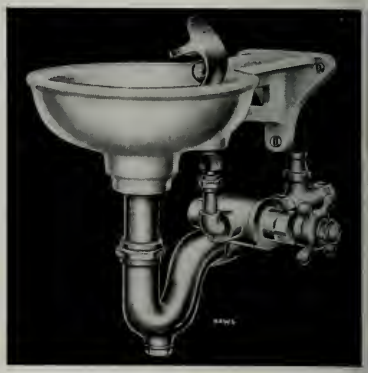

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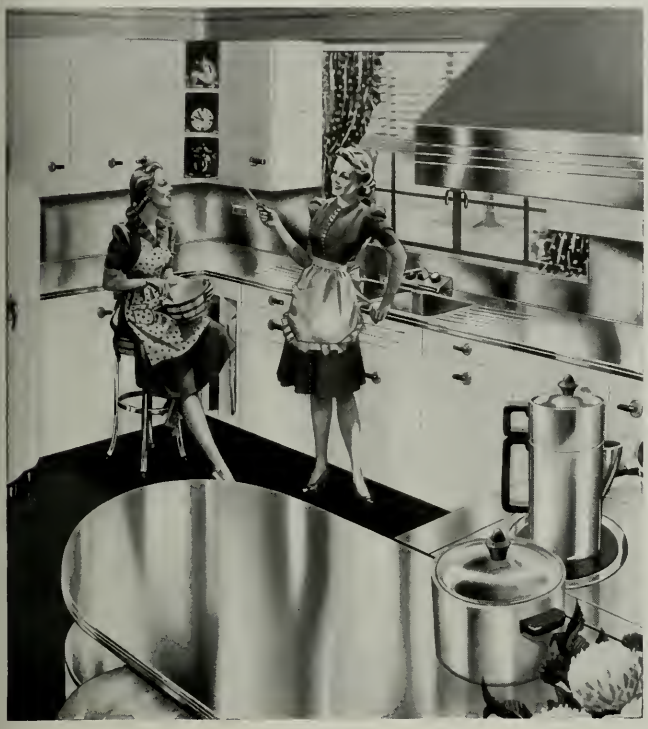

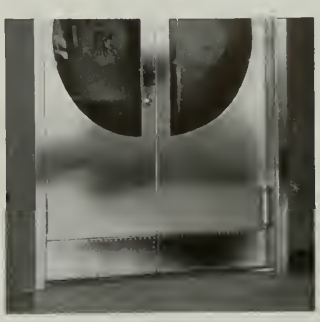

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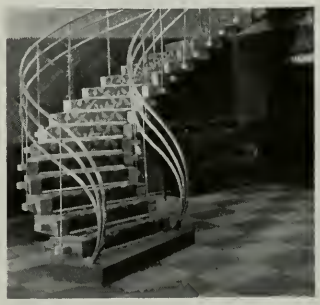

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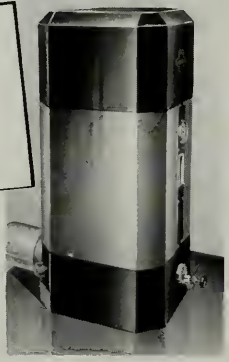

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It took an old timer in the field of automatic heating and air conditioning to develop and perfect this small, highly efficient boiler-burner package unit. Having passed its exacting experimental stage with flying colors just two months ago, it was presented to the public in December and has literally taken the building profession by storm.

You owe it to your clients who depend on your judgment for heating specifications to become fully informed on this newest member of a famous line.

Send for your copy of our fully illustrated four-color folder and be sure to see us at the National Oil Burner Progress Exhibition, March 17-22, at Philadelphia.

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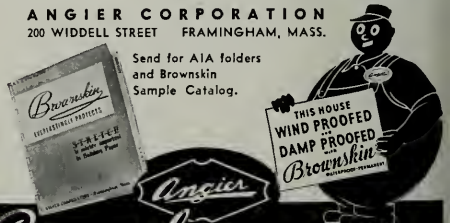

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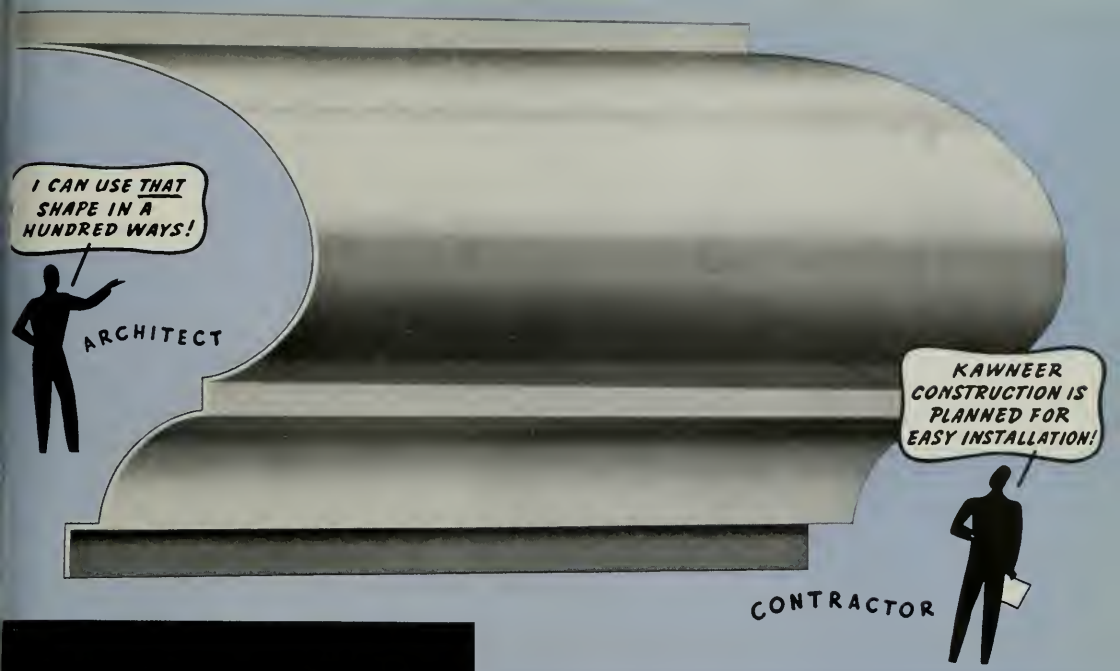
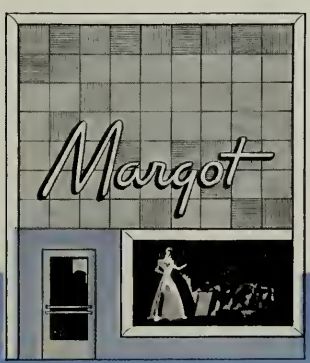


ese two striking store front designs show how easy it is to ate modern store fronts by featuring Kawneer Cold-Rolled ulding No. 90-K. Many other Kawneer shapes offer equally eresting possibilities. NOTE ALUMINUM FACING PANELS.



"The Kawneer Front" is an illustrated store front magazine that shows latest trends in store front design and latest developments in Kawneer Store Front Construction as they appear.

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STORE FRONT DESIGNERS find constant inspiration in the many useful *Kawneer* shapes available. Moulding No. 90-K, illustrated above and applied to store front design at left, is an example selected at random from the Kawneer line of Rolled Store Front Construction. With this decorative shape a striking feature can be introduced, and greater unity and simplicity secured in the design.

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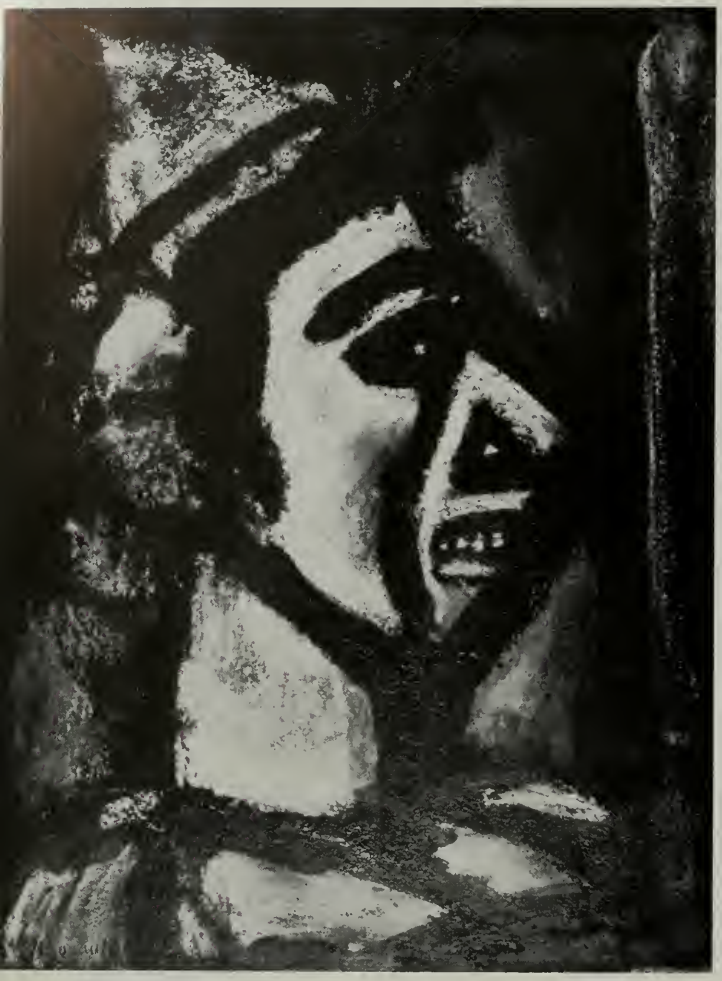
If you are not now receiving "The Kawneer Front," write Kawneer today. New bound sets of f. s. details are also available on request. THE KAWNEER COMPANY, NILES, MICHIGAN. Branches: New York City, Chicago, Berkeley, California.

IT'S EASY TO DESIGN AND INSTALL STRIKING

Kawneer STORE FRONTS



HEAD OF A CLOWN by Georges Rouault

NEWS AND COMMENT ON ART

by charles lindstrom

GEORGES ROUAULT

AT the San Francisco Museum of Art the most important exhibition of several months was the retrospective show of Georges Rouault's paintings.

Rouault's work is a rich mixture of many potent effects—the tragic, the sweet, the mysterious—which blend to give a quality generally described as spiritual. These effects are brought to such an intensity that one naturally looks in his art for some practical message that would justify so furious an expression. Religious passion, humanitarian zeal or simply an intense craving for a vivid consciousness of being alive—there is evidence for each of these as Rouault's goal.

Rouault's earlier work particularly shows a revulsion from the evils of society. It does so quite without humor, and it dwells on vicious subjects as though driven by some mystic duty to unmask evil. It seems to bear no hope of correction, but only to insist upon absolute moral values.

Yet if regarded as works of moral significance, one is given no sharp contrast of good to hold up to the attacks on evil. Opposed to his brutal judges, his gross trollops, there are only the tortured clowns, the anguished Christ or dispassionate female figures. In describing his early life he has said of himself: "Everything seemed beautiful to me, even in the darkness, when the night puts the good and the bad to sleep—if it be true that some are good and some are bad."

His religious subjects deal more with human suffering than with faith or devotion. His Christ is the tortured victim of brutality, more broken than transcendent. And it is perhaps his clowns and other non-religious subjects that impart the strongest "religious" feeling.

If there is message in Rouault's work, it seems more nearly to say that life is pain, that life is often gross and it may be cruel, but it is fiercely important nonetheless if by instinct only. The intensity of sensation is beautiful even when its image is grotesque and its meaning is pain.

And Rouault's painting is not as painful as it looks at first. Those lurid black lines, for instance, do not impart tragedy only. Their function is basic. They force a kinesthetic reaction which makes us feel these pictures with our muscles and our bones. They make us imitate the stress and strain, the stretch and relaxation, and feel all the emotional states which changes in posture connote. The black also sets off the color, making it glow like embers, to arouse vague but powerful emotions. The rich surfaces give a tactile thrill. And the mysterious, infinitely suggestive subjects by their very depth of mystery make us receptive to all these direct esthetic devices. Rouault proudly admits being called "the last of the Romantics."

ANTONIO SOTOMAYOR

ANTONIO SOTOMAYOR amply proved his genius in the exhibition of caricatures at the San Francisco Museum of Art from his Art-In-Action days at the Fair. The pastel portraits were nearly all of other artists who participated in the Fair, and as they were well known to most people this made the show much more fun.

Sotomayor achieved in some of these the very essence of the caricature art. From his DONG KINGMAN, for instance, although there was nothing more than a compact silhouette and a generous smile there sprang the most vivid impression of Dong Kingman. And his ESTHER BRUTON seemed to generate a small blonde cyclone of energy, with freckles.

His caricatures have a compact and forceful design which makes the telescoped personalities entirely satisfying to one's visual sense of logic. The ZYGMUND SAZEVICH, for example, was extremely abstract—hardly more than a dozen shape-describing lines—but it was so logically integrated that it was vigorously alive. Each work, while perfectly describing the person who posed for it, seemed independent of such reference. It was an equivalent personality rather than a reflection merely—like a little soul which echoes certain properties of the mortal body but is a vital and independent being in itself.

Sotomayor's color helps in getting a character

dead to rights. The prissy, the cold, the soft, the smug, are deftly classified. But always there is the sense of affection—not the "I'm telling you this for your own good" sort of affection but rather an objectivity that can guarantee that the analysis of appearance makes no difference in personal regard. There is no malice in Sotomayor's work.

Everyone, of course, has a pose, part born character and part deliberate role—a ruggedness or efficiency or suavity or some attitude that seems appropriate and admirable. These caricatures show the victim in a moment of hamming, when he overdoes the act just enough to give the whole thing away. A statement by Sotomayor explained that the caricatures were done in great haste. Some could have been done better at a second or third sitting, perhaps, but most would not improve by more deliberate analysis. They rely upon intuitive first judgment—the immediate seizing upon the personality as it projects itself at first acquaintance —the highly sensitive record of a snap judgment.

MALLETTE DEAN

MALLETTE DEAN'S exhibition at the San Francisco Museum of Art in the Art Association Gallery showed steady achievement during the past half-dozen years. He is best known for his linoleum cuts, and rightly so, for they are of excellent craftsmanship and strong design. Their technical clarity though sometimes cold is always crisp and clean. In color prints he has the facility of a Japanese woodblock printer. His recent work makes especially fine use of two-block printing in black and grey. There is a softness and grace in this which the single block cannot achieve and which gives Dean's work a needed warmth.

Mallette Dean's tempera paintings seemed often to echo the sharp, meticulous character of the wood-cut in the essentially free and fluid medium of brush and paint. In APPRAISER'S BLDG.—1874-1940, however, there was all the breadth and integration one could wish. Painted last year, it showed the old San Francisco landmark reduced to red-brick rubble with the steel skeleton sticking through. There was a warmth of fancy in it, with everything ordered by a single enthusiasm which gave it an easy unity. His paintings of this year have resumed the earlier meticulous method, but at least two of these, POINT BONITA and FORT POINT, approach the purity of design and subtle graduation of color which justifies this method. Even so APPRAISER'S BLDG. remained a high point of the show.

LUIGI LUCCIONI

THE paintings of Luigi Luccioni at the Legion of Honor Museum were especially interesting because Luccioni presents a type of draftsmanship as pure in one field as Rouault does in another. Both men record tactile sensations rather than purely visual sensations. But whereas Rouault's drawing is kinesthetic, Luccioni's could be called membraneous. He seems to feel everything with his skin but never with his muscles and bones. His painting surface is like a delicate membrane. There is in it some illusion of depth but none of the spatial conviction that makes you feel the strain of bulk and weight. What happens on the surface of us is naturally less moving than what happens within us, and Luccioni attempts no more than a painstaking record of surface sensation.

CURRENT EXHIBITIONS

Important current Exhibitions are:

At the Palace of the Legion of Honor—

Miniature Rooms by Mrs. James Ward Thorne, through March.

At the De Young Museum—

Retrospective Exhibition of the Work of George Grosz, Opening March 29.

At the San Francisco Museum of Art—

Retrospective Exhibition of Paintings by Kenneth M. Morrison. March 26 through April 13;

Fifth Annual Watercolor Exhibition of the San Francisco Art Association, March 26 through April 20;

Paintings by Paul Klee, April 14 through May 5.

VIEW HOUSE IN SAN GABRIEL FOOTHILLS

residence for mr. and mrs. charles lane, linda vista, california
theodore l. pletsch, architect

A SUPERB view of the San Gabriel Mountains and an unusual side approach to the property, influenced the design of this charming residence of Mr. and Mrs. Charles Lane in Linda Vista, Pasadena. Theodore L. Pletsch is the architect. A large paved area

all-gas kitchen

at the front furnishes parking space for guests. A rear stairway, required by the owner for the maid's rooms upstairs, makes for remarkably fine circulation, and illustrates how a problem may often resolve into added enhancement of the plan.

Equally fine results were achieved in mechanical convenience and comfort, with modern automatic gas equipment installed for all heating, cooking, water heating and refrigeration. Gas-fired gravity heating units allow maximum flexibility in meeting year-around temperature needs.

ENGINEER MOVES

L. H. Nishkian, who has maintained offices in the Underwood Building, San Francisco, for many years, has moved to 133 Sansome Street, near the Engineers' Club Building.

Many homes shown in this issue
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CIVIL ENGINEERS ASSEMBLY

The annual "get together" of civil engineers will be held under the auspices of the San Francisco and Sacramento Sections of the American Society of Civil Engineers and the Structural Engineers Association of Northern California at Sacramento Friday and Saturday, March 28 and 29. The meetings and banquet will take place in the Elks Club, Friday evening's program starting with cocktails, then dinner and entertainment. The banquet speaker will be Albion Ross, Foreign Editor of the San Francisco Chronicle, whose subject will be "World Affairs—Will Japan Permit Peace?" Mr. Ross has only recently returned from the Orient.

Saturday the delegates will be escorted to one of the nearby military camps where they will get an "eyefull" of the government's training program. For those who do not care to make this excursion, arrangements have been made for a golf tournament at the Del Paso Country Club.

The military authorities have requested the following conditions be rigidly adhered to:

1. Limited to members only.
2. Limited to full citizens subject to approval by military authorities.
3. No members of subversive groups admitted.

TO "FARM OUT" SUB-CONTRACTS

Inauguration of a government program of "farming out" sub-contracts to expedite production of defense equipment will find the San Francisco Chamber of Commerce ready with a survey of industrial facilities in the San Francisco area, it was revealed recently.

Harold Squires, manager of the Chamber's Industrial Department, said the Chamber foresaw a move to decentralize the defense industry and began a census of machine shops and other facilities in June, 1940.

Although still underway, the survey even now presents a graphic cross section of San Francisco's industrial potentialities, showing the number of plants of variegated types, equipment, personnel, and proximity to transportation media.

SUN-DECK WARMTH THROUGHOUT

...with a Payne MODERN CONSOLE

Even gray days are gay days in the intimate small home of Eleanor Gardner, in the Berkeley, California foothills. When Old Sol goes off duty, PAYNEHEAT takes command, lending "sun room comfort" to *every* room. Compact modern design by architect William Wilson Wurster lends a feeling of spaciousness, yet with the heating area limited, an economical gas-fired PAYNE *Modern Console* has proved a wise choice. ★ For a most attractive vented unit to heat small homes, specify the *Modern Console*. Architects: See our section in the new Sweet's or Western States A-E-C Catalog.

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THE MASTER BUILDER

By ALDEN B. DOW Architect

THE fundamental job for the architect is to produce a useful building. With this as a premise, it follows naturally that the only way architects as a whole can increase their value to society is to organize their profession so that it produces the greatest number of useful buildings.

As a step towards this organizing, let us analyze the term Useful Building. What makes one building more useful than another? Generally speaking, the Useful Building is the properly planned building. The proper plan requires the following:

(1) the proper form of building,
(2) The proper use of materials,
(3) the proper price of materials,
(4) the proper availability of the finished product.

Is the architect satisfying all of these requirements? Apparently he is not, because a very high percentage of architecture produced in this country today is not produced by recognized architects, but by so-called builders. The funny part of it is—the architect has always been called the Master Builder. So, today, there is some question as to who is the architect.

Why is this? Is the builder better equipped than we are? Does he know more about (1) the form of building required, (2) the materials used, (3) the price of materials, (4) the availability of the finished product?

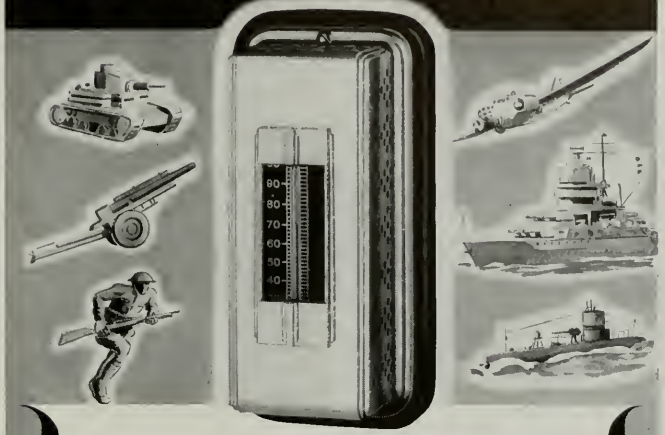
The answers to these questions could fill a book, but reduced to as few words as possible, they would say just this: Except for the first requirement and some technical skill, the builder knows more about all of these than the architect; there are, of course, many exceptions. The builder may not have a great amount of factual knowledge; but he has a considerable amount of intuitive knowledge, and that is the one thing that makes factual knowledge practical. All the facts in the world are useless without this coordinating agent and that is the architect's weakness and the builder's strength. The builder has a contact or association that the architect does not have and, therefore, a valuable sense of building and merchandising that is foreign to the architect.

The builder has another advantage over the architect. He starts his practice with the smallest kind of a job and develops it with his capacity. The architect, on the other hand, is obliged to put a minimum upon the size of job which he will undertake. Because of this, the largest field in architecture—the small house—has been forced out of the realm of practical architecture. Little wonder that there are so many architects looking for work; their fundamental ideas of production are unsound and the untrained builder grows right under their noses.

We may say that we do not care to become involved in the builders' side of this profession. The answer to that is: all things either grow or die. There is no happy medium. If we are going to be leaders of the

(Turn to page 76)

PRECISION MACHINERY
MUST BE BUILT UNDER PRECISE TEMPERATURE CONDITIONS



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Johnson engineers have intimate knowledge of many manufacturing processes. For example, ask them about International Standards for the temperature of rooms in which metal parts for precision machinery are measured. Special problems like that are the regular order of business for Johnson technicians and sales engineers. Ask to have one of them call or send for descriptive bulletins. No obligation, of course.

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Pratt & Whitney Aircraft Div. of United Aircraft Corp., East Hartford, Conn.
Grumman Aircraft Engineering Co., Bethpage, N. Y.
Picatinny Arsenal, U. S. War Dept., Dover, N. J.
Wright Aeronautical Corp. (motor packing & shipping bldg.), Paterson, N. J.
Eclipse Machine Div., Bendix Aviation Corp., Elmira, N. Y.
Ohio Crankshaft Co., Cleveland, O.
Ford Motor Co., Aircraft Bldg., Rouge Plant, Dearborn, Mich.
Kearney & Trecker Corp. (machine tools), Milwaukee, Wis.
Kelsey-Hayes Wheel Corp., Plymouth, Mich.
E. I. du Pont, de Nemours & Co., Indiana Ordnance Works, Charlestown, Ind.
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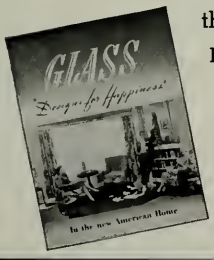

* * *

This free illustrated booklet describes "Design for Happiness" glass features. Write for your copy, and for information about this program and your part in it. Address: Dept. AE-341, Libbey-Owens-Ford Glass Company, Toledo, Ohio.

L O F

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WILLIAM WILSON WURSTER

Today architecture is undoubtedly passing through a transition—a transition from an eclectic period of the past towards a more vital period of the future, whose structure and form are only becoming vaguely apparent. Bombs dropping throughout Europe, scientific research, a rapidly mounting debt structure, new methods of transportation, new ideas and upset theories—all these are to affect and form a new architecture—and a new world.

In this transition period, California and the San Francisco Bay Region in particular, have been the scene of perhaps one of the healthiest movements in contemporary architecture. It is reflecting the present day without killing off the past. It is accepting the fact that you can not make a clean break from any former period without revolution. Fortunately this easy transition is being led not by any one man, but by a growing number of architects, each solving his problems in his own way. Among these men is William Wilson Wurster.

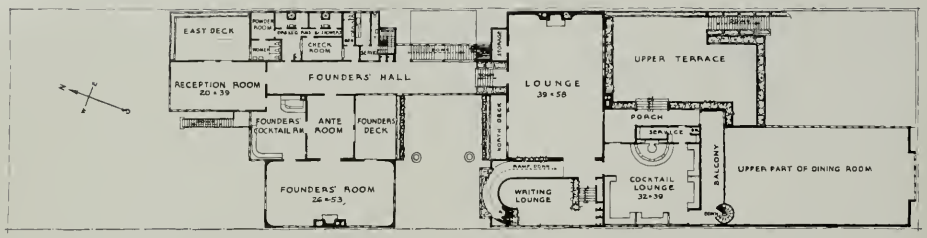
Mr. Wurster was born in Stockton, California, studied architecture at the University of California, and then went to Europe for a year of travel and study. On his return he worked in New York for the firm of Delano and Aldrich who were then building many of the large homes on Long Island for which their office became so well known. In 1924 Mr. Wurster returned to California and shortly thereafter opened his own office in San Francisco.

The scope of Mr. Wurster's work has been large. A complete survey of it requires a tour of practically all of Northern and Central California. His first real start was probably at the Pasatiempo Estates, near Santa Cruz. Here he built a large number of houses and had an opportunity to develop his own theories and crystallize his ideas. Here, too, he came in close association with Mr. Thomas Church, landscape architect, with whom he has so frequently collaborated successfully.

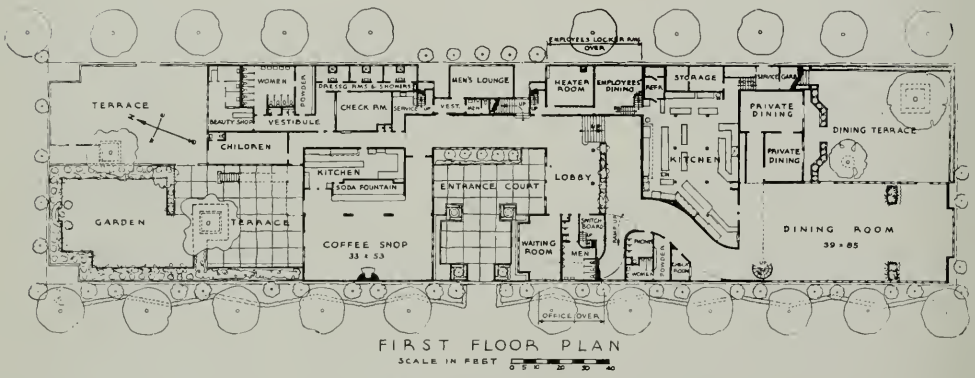
Mr. Wurster's work, while showing wide divergence in subject and execution, seems dominated by certain broad characteristics. His buildings all have simplicity and restraint which produce an extremely fresh quality. Economy always plays a dominant note in his designs and his natural abiilty to work with ordinary materials in a skillful manner accounts in large part for his outstanding success in the field of inexpensive buildings. Believing that houses should be merely a backdrop for the life within and the landscape without, rather than a dominant note in themselves, his plans are evolved with a generous open quality which, combined with extensive use of glass areas, creates an enlarged sense of space even in his smaller houses. The interiors again repeat the same qualities. Unbroken wall surfaces create a simple background against which any furniture may be placed and not be

stairway in yerba buena club
golden gate international exposition
william wilson wurster, architect

The Editor acknowledges the capable cooperation of Joseph L. Johnson, one of Mr. Wurster's associates, in the selection and arrangement of illustrations. The use of heavy type and the absence of capital letters in picture captions is a somewhat radical departure from Architect & Engineer's style and it will be interesting to note the reader's reaction. All photos are by Roger Sturtevant.



SECOND FLOOR PLAN
SCALE IN FEET



FIRST FLOOR PLAN
SCALE IN FEET

plans, yerba buena club, golden gate international exposition
william wilson wurster, architect

altogether out of keeping. Mr. Wurster's sincere reluctance to impose his personal preference on matters of furnishing reflects the transition period through which we are passing. For many clients new furniture would be an economic loss or a sentimental sacrifice which they do not care to make. Still others are unable to find furniture in the contemporary style satisfactory to their taste.

That an architect can operate successfully in the field of small inexpensive buildings has been an underlying thought throughout Mr. Wurster's practice, and for this reason, with the exception of the Yerba Buena Club, the accompanying illustrations have been selected.

For the accomplishment of his work, Mr. Wurster has developed an office of a type different from that which is commonly found. Within the organization there is complete freedom of criticism on each job, which attempts to keep the work from following any set pattern. Recognizing the fact that a repetitive job is more highly efficient, he has nevertheless developed his office on the reverse principle. There is no designer, nor specification writer nor job superintendent per se. Each member of the office shares in every operation of the project—even to joining in conferences with clients. In this way each operation is constantly subject to fresh scrutiny and criticism, and is being revised. Moreover, a broader view of the complete job is acquired by each man which counteracts any tendency towards unbalanced emphasis on any one operation. Needless to say, for the young draughtsman such an office is an ideal training ground.

That the individual work of some of these men may be seen, the final pages of this portfolio illustrate what they are doing independently of the office. Joseph L. Johnson.

YERBA BUENA CLUB, G. G. I. E.
SAN FRANCISCO, CALIFORNIA

william wilson wurster, architect

Built as a temporary structure to house a Women's Club at the Golden Gate Exposition, this plan offered several interesting solutions to the problem. Taking full advantage of a fine setting on the border of one of the great gardens on one side, and the Bay on the other side, the main rooms open in these two directions. Into the plan weave a series of beautifully planted terraces and courts which, combined with extensive interior planting, form a continuous pattern of green.

Temporary in character was the use of plasterboard on the interior and plywood on the exterior. To relieve the expanses of plywood, to allow the inside to dictate the window location and create an interesting pattern, a wood trellis was carefully evolved on a modular system. The use of gold metallic lacquer on the

entrance

iew from street

east wing

terrace

ning room

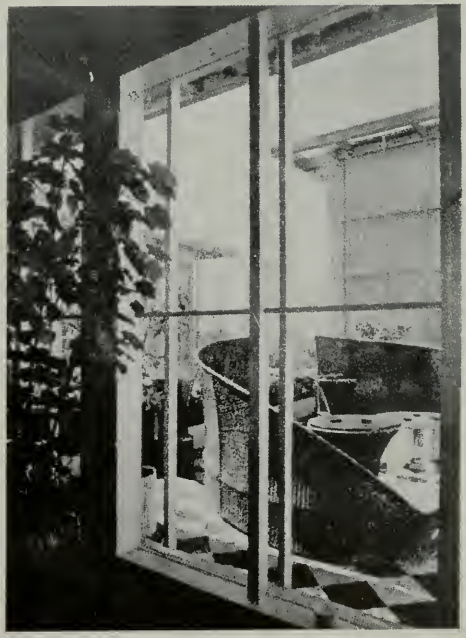
exterior combined a fine background for planting with a good exposition character. Inside an extensive amount of silver and gold wallpaper again created the same effect.

The exterior lighting was placed along the edge of the projecting trellis at the roof which formed a lighting trough. From this came a soft glow giving a general light to the building while the interior light became the dominant source of illumination.

Charles Stockholm and Sons were the general contractors.

A. V. Saph of San Francisco was the structural engineer.

Mrs. Frances Elkins was in charge of interior decoration while the Misses Worn were responsible for the attractive landscaping both inside and outside.

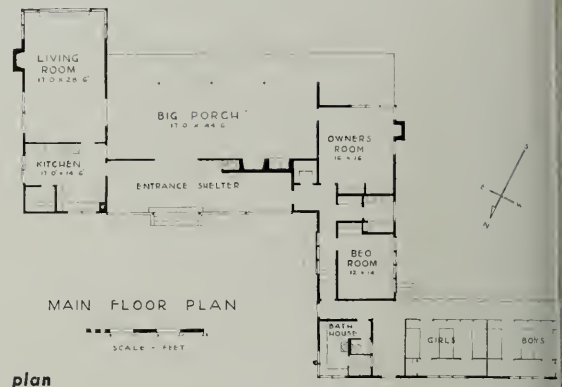


founder's deck

SUMMER HOUSE FOR MR. AND MRS. ROBERT GREEN
MT. DIABLO, CALIFORNIA

william wilson wurster, architect

Situated near the top of Mt. Diablo on its south slope, this house has a simple flexible plan—ideal for summer use. The large outdoor porch connecting the living and sleeping areas retains the scale of the countryside. The eaves are 13 feet above the hollow tile floor and the big fireplace becomes the natural center for entertaining. Outdoor circulation is again used along the dormitory wing; throughout the scheme the materials have been used in a rough and vigorous manner, perhaps at a sacrifice of details. Most materials are untreated. The ceilings are of insulite and the interior walls of Douglas fir plywood.



plan

general view

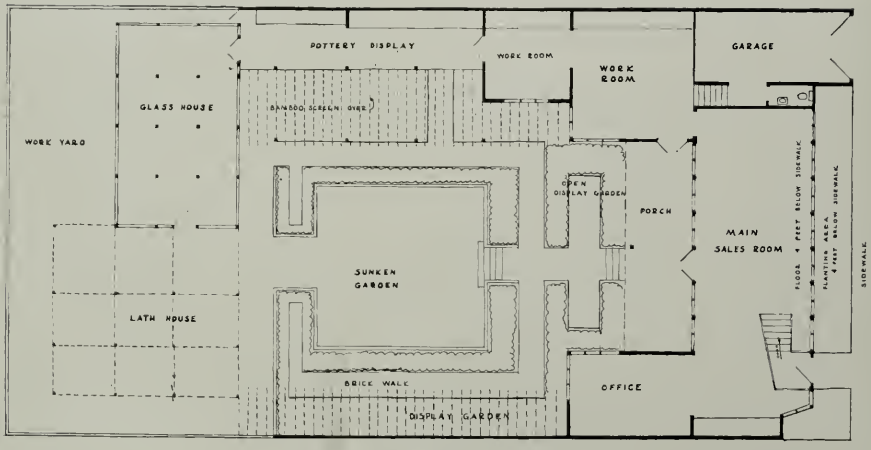
entrance porch

big porch

outdoor hallway

MARTIN & OVERLACH NURSERY
POTTED PLANTS
4525

front


POTTERY DISPLAY
WORK ROOM
WORK ROOM
GARAGE
GLASS HOUSE
BAMBOO SCREEN OVER
WORK YARD
OPEN DISPLAY GARDEN
PORCH
MAIN SALES ROOM
FLOOR 4 FEET BELOW SIDEWALK
PLANTING AREA 4 FEET BELOW SIDEWALK
SIDEWALK
SUNKEN GARDEN
LATH HOUSE
BRICK WALL
OFFICE
DISPLAY GARDEN

plan

MARTIN AND OVERLACH NURSERY, SAN FRANCISCO, CALIFORNIA

william wilson wurster, architect

Built of the simplest possible construction, the building is only a setting for the combined workshop and display area for flowers and plants. On both sides and again in the ceiling the building is open with a continuous band of glass, permitting the whole interior and court to be on display from any viewpoint. The construction is based on a modular system working with rough exposed framing lumber.

Of interest is the placing of the glass against the rough studs, the rhythm created by the row of ceiling joists—spread to carry the outriggers at the eaves—and the regular pattern created by using a unit system. The exterior wood is painted a mustard yellow to set off the extensive amount of green.

Due to the difference in level between the lot and the sidewalk, the floor of the main salesroom was placed on the lower level to permit greater ease of circulation within the nursery, rather than raised to permit easier circulation from the sidewalk and from the raised entrance platform a view of the whole floral display is obtained.

from entrance door

sunken garden

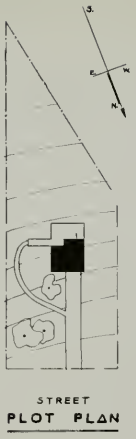
porch

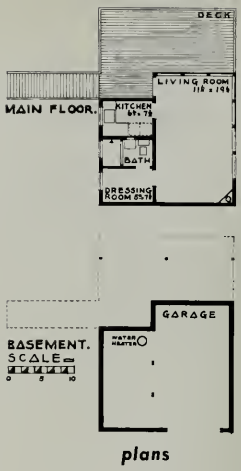
sales room

HOUSE FOR MRS. H. B. HARKER
MILL VALLEY, CALIFORNIA

william wilson wurster, architect

Here is a fine example of the architect building a minimum house. Efficient planning dictated the bath and kitchen being adjacent—with the water heater directly below. The living room and deck have a magnificent view of Mt. Tamalpais. Interesting is the connection of the deck to the ground by means of a small bridge. Here too is an example of personal furniture fitting into a simple background. The exterior material is redwood boards and the interior is faced with slash grain Douglas fir. A. W. Teather was the general contractor.





plans

view towards mt. tamalpais

living room

franklin stove

TOWN HOUSE FOR MR. AND MRS. HENRY DOBLE, SAN FRANCISCO, CALIFORNIA

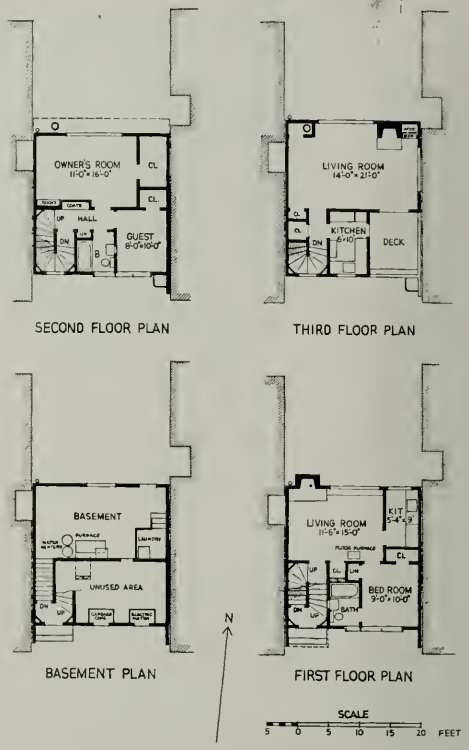
william wilson wurster, architect

The house for Mr. and Mrs. Henry Doble shows one of the possibilities of building on a crowded city lot only 22 feet wide. Within the frame work of 22 feet by 25 feet are contained all the amenities for comfortable living in the city—including an apartment for rental purposes. Interesting as an abstract composition is the irregular placing of the fenestration contrasting with the regular spacing of the playful, curved fire escape (to be climbed from the inside).

Every effort was made to simplify the house. The interior walls are finished with integral colored California stucco and porcelain sockets are used instead of fixtures in most cases. The ceiling of the living room follows the slope of the roof. The deck was kept on the southeast to catch the sun and provide shetler from the winds. Its relations to the living room and kitchen make it ideal for outdoor meals.

Structural engineering was done by A. V. Saph and the general contractor was J. Harold Johnson.

Maurice Sands was the interior decorator and Thomas Church did the landscaping along the front.



doble kitchen

DECORATIVE ARTS EXHIBIT, GOLDEN GATE INTERNATIONAL EXPOSITION, 1939 —
TREASURE ISLAND, SAN FRANCISCO BAY, CALIFORNIA

william wilson wurster, architect

This exhibit at the 1939 Fair is an interesting treatment of building materials grouped in a highly decorative manner—as a background for a few select items of display. The restraint with which the exhibit was handled is an example of Mr. Wurster's fine touch with ordinary materials. The floor is concrete washed and broomed before setting—divided by redwood header boards. The walls are built of concrete blocks and the ceiling is indicated by steel joists.

Helen Bruton designed the plaque and the furniture was provided by the Southern Chapter of the A. I. D. and arranged by Harold Grieve.

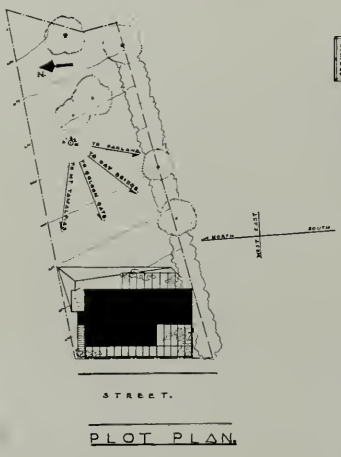
Lockwood deForest of Santa Barbara was responsible for the planting.

APARTMENT AND GARAGES FOR MISS ELEANOR GARDNER, BERKELEY, CALIF.

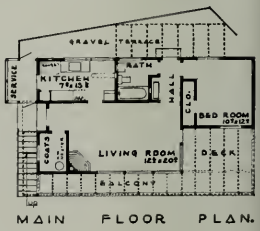
william wilson wurster, architect

The problem of a rental apartment over a four car garage at the bottom of an extremely steep hill, was solved in an interesting manner. Fortunately the view and the proper orientation coincided so that the deck off the living room becomes a sun porch with a magnificent view. Little planting was done; instead the natural growth was permitted to come down the hill and surround the house. The trellis was built so that the planting might also come over the house and form a translucent protection from the glare of the water beyond.

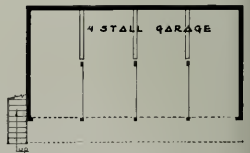
A. V. Saph was the structural engineer and Enoch Tranmal was the general contractor.



PLOT PLAN.



MAIN FLOOR PLAN.



GARAGE FLOOR PLAN.
SCALE.

from south

kitchen

living room

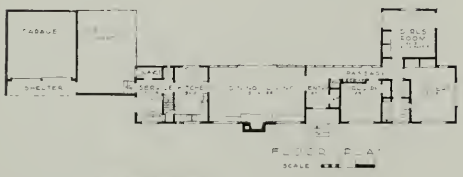
living room

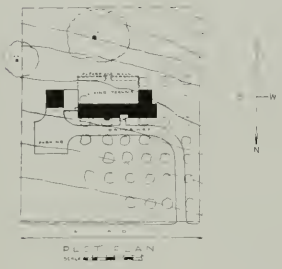
designed for the mural conceptualists show of 1940 at the san francisco museum, this was one of a series of drawings showing the possible uses of abstract plaques incorporated as decoratve features in architectural subjects, the plaque was designed by dorothy joralemon.

by theodore c. bernardi

HOUSE FOR A. R. TROGDEN, LOS GATOS

floyd b. comstock, architect





An extended plan here made possible a southern exposure throughout the main portion of the house with cross ventilation in all but one room. Of particular interest is the use of structural wood mullions, into which the fixed glass has been set directly, without frames. The interior finish is a grey integral colored stucco and the exterior an off white brush coat stucco. The general contractor was Ormal W. Dodd.

view from south

from orchard

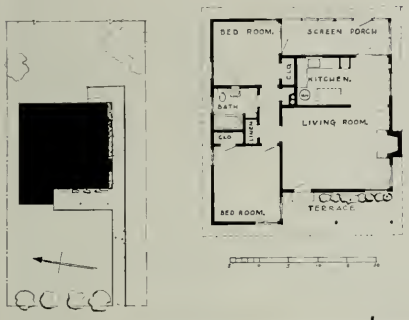
trogden house

passage

OFFICE OF WILLIAM WILSON WURSTER

The staff of any architectural office is of necessity a changing group of men and any summary of its members shows only the organization at one particular time. The following pages are devoted to the work of some of the men now in the organization which they have executed independently of the office. The variety of expression is of interest in indicating the difference of personality and architectural beliefs found within a single group.

left to right: wurster, bernardi, day, rice, deshon, kartwold, johnson, langhorst, comstock, emmons, barss.



plans

HOUSE FOR MISS C. P. COMSTOCK CASTRO VALLEY, CALIFORNIA

floyd b. comstock, architect

Such a small house of simple distinctive character suggests that more of these might well be built. The living room is separated from the kitchen by large folding doors which in actual practice are very seldom shut. All the heating is from a single Aladdin floor furnace which adequately takes care of the four rooms. The interior finish is a pearl grey integral colored stucco and the exterior is rustic, unsheathed, with white trim.

front

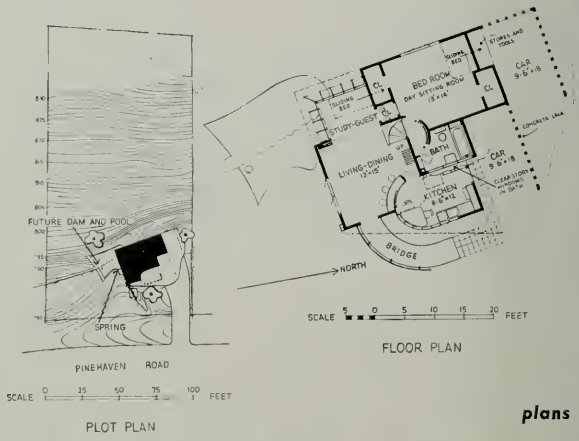
HOUSE FOR FRANK deWITT, OAKLAND, CALIFORNIA

by william maxwell rice
with frank h. dewitt

This ingenious small house is located in a pine wooded canyon in the Oakland Hills surrounded by a natural growth. The large window to the southwest does not infringe on privacy but looks on a rocky creek which will soon be damned to form a pond on the owner's property. The sun does not glare through this window because the rapidly rising wall of the canyon to the west shades this side of the house in the afternoon.

Opening windows have steel sash; fixed windows are constructed by applying glass to the surfaced studs. A single flue catches the floor furnace, hot water heater in the basement and the kitchen stove. The entrance to the house is over a curved reinforced concrete bridge and concrete is used for the "lace" walls of the carport.

The exterior is textured wood siding, painted, and the interior is finished with Philippine plywood. Mr. deWitt, established in the business of designing and executing contemporary interiors, did his own furnishing.



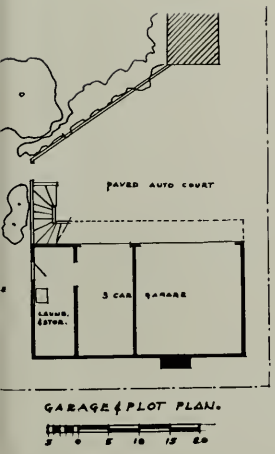
plans

view from street

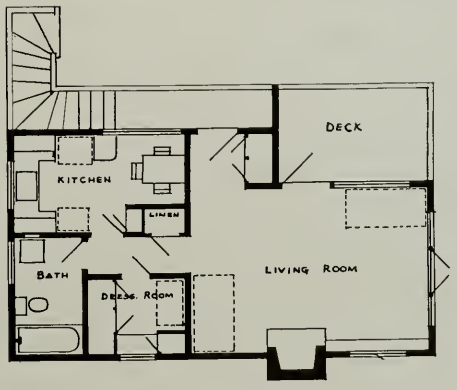
view from west

entrance

This proposed building was to have been built in the rear of a Los Angeles lot as a combined garage and income apartment. Interesting is the use of the outside stairway separated from the deck by means of a fin wall. The convenient placing of the service yard makes it accessible to both houses without its becoming a detriment to either. An attempt has been made to bring the planting of the front house as close to the deck as is possible and a fine view over the adjoining garden would be obtained.



GARAGE & PLOT PLAN.



APARTMENT FLOOR PLAN.

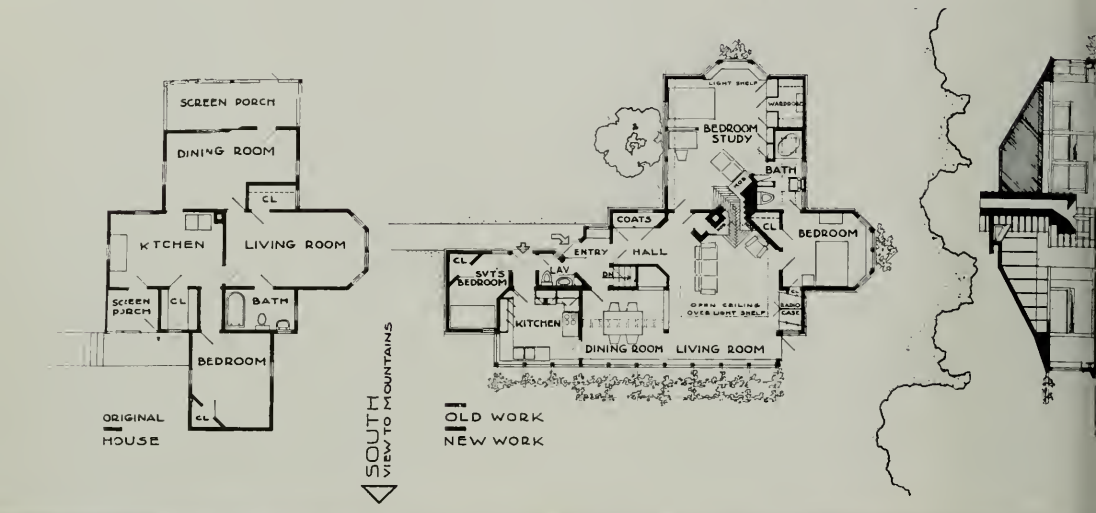
OPOSED APARTMENT AND GARAGES

onn emmons

RANCH HOUSE REMODELLING FOR MR. AND MRS

SHERIDAN, WYOMING

frederick l. langhorst, architect



EDWARD DAWES MEANOR

Because of its convenient relation to the other ranch units and its unobstructed view toward the Bighorn mountains to the south, the original caretaker's house was chosen by the owners for alteration to meet their needs.

Several schemes for enlarging the old south bedroom into a new living room proved unsatisfactory because they failed to open the house sufficiently toward the view. Finally by literally opening the house up and moving the obstacle bedroom around to the west solved the problem and also that of additional area needed as the part moved could be placed a little apart from the house and the gap filled in.

To create the new kitchen and dining room and additional space in the living room a "bay window" four feet by forty feet was added on the south, extending the roof out slightly to cover. The old porch foundation provided part of this new footing. The soffit joists of this new Bay are extended beyond the eave as lookouts to carry vines which, when in leaf in summer will act as sun shelter and when without leaves in winter will allow the sun to aid in heating during the sub-zero weather.

In search of a low cost masonry material, the Sheridan Press Brick Company cooperated in an experiment mitre cut ordinary hollow tile in order to attain closed corners. These tile were sawed after leaving the extruding machine, before firing. A projecting brick course breaks the joints so that tile joints line vertically. The tile are a finely scored type with a soft texture and both tile and brick were salt glazed to a matching warm brown color.

The through fireplace permits the evening Living Room fire to be enjoyed at night in the bedroom—a solid metal screen (in photographs shown on study side) fits either opening and prevents cross drafts. The masonry hobs obviate the necessity of andirons.

The open ceiling of the Living Room is made possible by the buttress action of the east and west wings of the house which take the thrust from the rafters. The spacing and lightness of these rafters precluded the use of lath or plaster—a virtue, in that insulation board was the result, with wide flat battens taking on the pattern of the concealed structure. Clerestory windows in the angle of the chimney provide summer ventilation.

Plumbing, heating and electrical systems are completely new, the heating being forced hot water in small pipe to convector type recessed radiators. The lighting is indirect in the living room and bedrooms and direct from recessed light boxes in the kitchen, dining room and bath.

▲ ORIGINAL HOUSE

▲ DETACHING

▲ MOVING

▲ IN PLACE

NEW WORK

LIVING ROOM SIDE OF THRU FIREPLACE

DINING ROOM, LOOKING TOWARD KITCHEN

BEDROOM-STUDY SIDE OF THRU FIREPLACE

DINING ROOM, LOOKING TOWARD LIVING ROOM

WHAT PRICE ARCHITECT'S FAILURE TO TRACK THE LAW

by leslie childs

ONE of the easiest ways for an architect to get into a peck of trouble, and perhaps suffer a substantial loss, is to overlook statutory requirements when contracting for public work. For here, as a usual rule, governmental units, as towns, counties, school districts, etc., are limited in their powers to contract by statute.

Consequently, unless such statutory terms are complied with, any contract entered into may prove but a scrap of paper, in so far as its enforcement by the architect is concerned. Here is a point that should never be lost sight of by architects, and as examples of judicial reasoning thereon, and the possible danger of a slip-up, the following will serve.

In one case, the plaintiffs, a firm of architects, brought suit against a county for $6,995 in damages for its alleged breach of a contract whereby the plaintiffs were to draw plans, and superintend the construction of a courthouse. The county, it appears, thereafter entered into a contract with another architect for the work, and the instant action by the plaintiffs followed.

In defense the county, among other things, set up that the contract sued upon was void because upon its date notice of intention to build the courthouse had not been published as required by statute. This, it appears, was true and the lower court found for the county. The plaintiffs appealed, and the higher court in affirming the judgment reasoned in part as follows:

THE LANGUAGE OF THE COURT

"The board [board of county commissioners] before * * * making any contract for the erection of a courthouse, must give notice in a newspaper of general circulation in the county of its intentions * * * to build a courthouse. The notice so required must specify the time and place when and where said matter will be heard. * * *

"We are of the opinion, and hold, that the board of county commissioners have no power, * * * to expend or agree to expend, any portion of the funds * * * for the erection of a courthouse, until the notice provided for * * * shall have been published as required by law. * * *

"It must be apparent to all concerned that the contract upon which the plaintiffs base their right of recovery was executed several months prior to the giving of the notice required * * *—that * * * the contract was wholly void * * *. The judgment of the trial court * * * is affirmed." (298 P. 896)

So much for that case.

In another of this kind, the plaintiff, an architect, sued a county board of education for services rendered in preparing plans and specifications for the erection of a high school building. Plaintiff sought $652.00 for services rendered, and $1,965.00 in damages, based, presumably, upon what his per cent. fee would have been had he supervised the construction.

Plaintiff's contract was oral, made with the county superintendent of schools, and the claim was that it had been ratified by the use of his plans by the county board of education. The statute, in short, required such contracts to be in writing. On the above facts, the trial court found against the plaintiff. The latter appealed and the higher court, after quoting the general rule from another case which required such contracts to be in writing, in part, said:

"This seems at first blush to be a harsh rule and one which no doubt works an injustice to appellant [plaintiff] in the present case. However, the law must deal in general rules if we are to have a government of laws and not of men. * * *

"If school boards should be held upon implied contracts or if those who, without any contract, contribute their services or supplies should be permitted to recover upon a quantum meruit, the doors would be opened for the most glaring raids upon the school funds. * * * Appellant [plaintiff] might easily have learned at the outset how to enter into a binding contract with the appellee. [board of education] He must now suffer the loss resulting from this neglect. Judgment affirmed." (121 S.W. 2d 716)

The foregoing cases are fairly representative of the reasoning of the courts in construing statutory limitations on the power of public officials to contract for public work. And, by the great weight of authority, the provisions of statutes of this character must substantially be followed if a valid contract is to result.

So too, the fact that an architect has acted in good faith in rendering services may be beside the point in respect to validating a contract. For, as a usual rule, the recipient, town, county, school district, or other unit, may retain the benefits thereof free from legal liability, if the contract was not entered into in compliance with the terms of the statute involved.

In the light of which, an architect may well watch his p's and q's when rendering services under contracts of this kind. And for his after protection he should be very sure of the adequacy of each step, in view of the statutory requirements, that leads to the making of a contract. And, as illustrations of the possible price of a failure to track the law here, the cases reviewed are of force and value.

ARCHITECTS MEET IN YOSEMITE IN MAY

THE seventy-third annual convention of the American Institute of Architects will be held in the Yosemite Valley, California, May 17 to 19. Delegates from the Institute's seventy-one Chapters throughout the country, members of the Producers' Council, and representatives of schools of architecture will participate.

Problems of construction and design under the national defense program, particularly in the field of housing, will be discussed. Reports and addresses will deal with developments in architecture and building, including state and municipal works, Federal public works, industrial relations, building costs, new materials, urban land use, city planning, national preparedness, foreign relations, registration laws, and education.

Plans by which the architectural profession can most effectively aid in promoting the national welfare will be outlined in a report by the Institute's new committee on the profession and society, of which Frederick G. Frost, president of the New York Chapter, is chairman. Methods of rehabilitating depreciated neighborhoods and enhancing their economic and social value will be described in a report of the committee on urban land use, headed by Frederick Bigger of Pittsburgh.

The report of the committee on building

lounge in ahwahnee hotel, yosemite valley, where a.i.a. will convene in may

costs will be presented by the chairman, M. H. Furbringer of Memphis, Tenn. The committee has been conducting an investigation of "all elements and factors that make up the costs of building, in order to determine if building costs are excessive and, if so, wherein the excesses lie and what means can best be taken to eliminate them."

Edwin Bergstrom, president of the Institute, in his address will discuss the position of the planning professions in building operations connected with national defense. The architects have taken a stand against the centralization of planning and design in Federal bureaus. Plans for public buildings in every locality, it is held, should be placed in the hands of competent architects, engineers, and landscape architects.

David Witmer of Los Angeles has been appointed chairman of the committee which is directing arrangements for the convention. Other members of the committee have been named as follows: Reginald D. Johnson, Carleton M. Winslow, David C. Allison, Harold Chambers, Gordon Kaufmann, Roland Coate, Palmer Sabin, Pierpont Davis, Paul H. Hunter, and William Schuchardt, all of Los Angeles, and Edgar Maybury of Pasadena.

Mr. Kaufmann is a member of the national board of directors of the Institute, representing the Sierra Nevada District, which comprises California, Arizona, Nevada, Hawaii, and other insular possessions in the Pacific. Pre-convention sessions at which Mr. Bergstrom will preside, are scheduled by the board.

Cooperating in plans for the convention is the Southern California Chapter of the Institute, of which S. B. Marston of Pasadena is president, and the southern section of the State Association of California Architects. Trips to points of historical and scenic interest in southern and northern California are planned. On May 26, the Northern California Chapter of the Institute and the Northern Section of the State Association of California Architects will be hosts to the architects in San Francisco.

ARCHITECTS' BULLETIN

Issued For

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Northern Section

STATE ASSOCIATION MEMBER
OF THE
AMERICAN INSTITUTE OF ARCHITECTS

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Harris C. Allen

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Clyde F. Trudell
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Lower San Joaquin:
Russell G. de Lappe
Santa Clara:
Chester Root
San Mateo:
Leo J. Sharps
Upper Sacramento:
C. C. Dakin
Sacramento:
W. E. Manhart
Upper San Joaquin:
D. H. Horn
Monterey Bay:
Robert Stanton
Palo Alto:
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Marin:
J. W. Bertenshaw
East Bay:
J. H. Anderson, Chairman
A. C. Williams, Secretary
T. N. Thompson
Berkeley:
C. R. Schmidt
Redwood Empire:
F. T. Georgeson
Lassen:
Ralph D. Taylor

PUBLIC RELATIONS

THE Executive Board has employed professional public relations council to prepare a complete program for information publicity, to embrace the entire building industry, including necessary co-ordination with other branches of the industry. Members will receive complete information and continuing reports on the development of this program.

Following the general approval of our experimental radio broadcasts last year, the Board believes that a broad program should be initiated now. Its progress will depend, first upon the united support of our own members to the limit of their ability, and then upon the active cooperation of the rest of the building industry. This, in turn, will depend upon an intelligent and thorough program prepared and managed by competent professional council.

Included in this program will be such items as:

Representation in public and semi-public Planning and Housing Commissions, Defense Councils, Civic and Commercial organizations, clubs, etc.

Closer contacts with financial, realty, utility, and other institutions.

Activities of a Women's Auxiliary.

Architectural programs for schools.

Synchronizing public relations and legislation activities.

NATIONAL DEFENSE

Although many contracts have been placed for defense housing and other defense construction, much remains to be done. It is now recognized that the resources of Government bureaus are not adequate to handle the enormous total required; and private architects and egnineers will necessarily be needed.

Large volumes and periodical report bulletins are being published on these subjects: "National Defense and Government Contract Service."

Efficient methods of bringing private professional service into this national defense construction work are being formulated as a part of the Public Relations activities now started. Time is the important factor in this particular.

PLANNING COMMISSION

The Executive Board has recommended to the Mayor of San Francisco the names of Ernest Weihe, Eldridge Spencer and Hervey Clark to consider for appointments to fill vacancies in the City Planning Commission. It would seem superfluous to emphasize the importance of having technical experience on such a commission.

HONORARY MEMBER

Walter J. Mathews has passed his 90th birthday, and has now relinquished the active practice of architecture in Oakland. Out of respect for his outstanding reputation for ability and integrity in upholding

the standards of his profession, the Executive Board has designated Mr. Mathews a Permanent Associate Member of the State Association of California Architects, with all privileges pertaining thereto.

SOUTHERN SECTION

The following changes have been made in the personnel of the Executive Board of the Southern Section: President, Walter R. Hagedohm; Vice-President, E. Allen Sheet; Secretary, Winsor Soule; Treasurer, Robert H. Orr.

DIRECTORS

Representing the State Board of Architectural Examiners, Southern District: Winsor Soule.

Representing the Southern California Chapter of The American Institute of Architects: Benj. H. O'Connor.

Representing the San Diego Chapter of The American Institute of Architects: Wm. Templeton Johnson.

Representing the Architects at Large: Rowland H. Crawford, E. Allen Sheet, Walter R. Hagedohm, Robert H. Orr.

Regional Director, The American Institute of Architects: Gordon B. Kaufmann.

INCOME TAX

Many architects are not aware that deductions may be made by professional men for depreciation of office furniture and equipment, including technical books. This can be figured at 10% of cost, to be applied on tax returns for a period of ten years. Insurance premiums on office equipment may also be deducted. If you have already filed your returns and have overlooked these points, better get busy.

A. I. A. CHAPTER

Northern California Chapter officers for the year 1941 were reported in Architect and Engineer last month. They constitute a fine body of executives.

It should be noted that, due to the activities of the Membership Committee, headed by Mr. Hurd, the membership of the Chapter is now on an equal basis for delegates to the National Conventions, with the Southern California Chapter, which has had a larger representation for a number of years. Under the direction of the new president, Mr. Appleton, we may be sure the local Chapter will not lose its appeal to the interest and support of its membership.

UNIQUE COMPETITION

A unique feature of the February meeting of Washington Chapter, A. I. A., was the presentation of "Competitive Designs for a Chapter Meeting" with an interesting discussion of ideas advanced in writing or verbally, on what a Chapter meeting should be. Prizes were awarded those offering the best suggestions. Prior to the meeting dinner was enjoyed at the College Club, Seattle.

The following standing committees will serve during the current year:

Civic Design and Planning: Gowen, Vogel, Alderman, Richardson (S. H.).

Competitions: Thiry, Naramore, Osterman, Phillips, Richards.

Education: Thomas (D. P.), Gove, Chinn, Grevated, Lawrence, Oien.

Exhibition: Johanson, Overturf, Decker, Koon, Lumm, Moore, Rogers.

Institute Affairs: Alden, Albertson, Morrison, Willatsen.

Legislation: Jones (Vic), McClelland, George, Priteca, Wohleb, Pearson, Rothe.

Professional Practice: Herrman, Naramore, Holmes, Mallis, Vogel.

Public Information: Aitken, Lytel, Gould (Anne), Howell.

Ordinances: Young, Christenson, Bergseth, Mattson.

Membership: Olschewsky, Chiarelli, Lea, Richardson (P. D.), Gould (C. F.).

Program: Ayer, Aitken, Chiarelli, Shorett, Savery.

Ways and Means: Grainger, Albertson, Thomas (H.), Ball, Durham.

SPECIAL COMMITTEES

Building Industry Contact: Brady, McClelland, Horrocks, Clemmer, McNicoll.

Honor Awards: Pearson, Sproule, Fox.

Federal Buildings: Stoddard, Maloney, Graham, Pretica, Ahlson.

National Housing: Holmes, Fey, Mock, Jones (J. P.), Erickson.

Domestic Architecture: Shay, Loveless, Carleton, Groves, Turner.

Unification: Naramore, Grainger, Albertson, Hilborn, Troast.

Architectural Club House: Carroll, Priteca, Bickford, Broman, DeHart, Ripley.

Bulletin: Alden, Aitken, Smith, Pearson, Decker, Murray, Fullerton.

Annual Ball: Holmes, Moore (Philip), Carlson, Bringloe, Peterson.

OREGON CHAPTER BANQUET

The following attended the annual meeting and banquet of Oregon Chapter, American Institute of Architects, at the Congress Hotel in Portland, January 21:

Fred Aandahl, Pietro Belluschi, Herman Brookman, Walter Church, William H. Crowell, J. W. DeYoung, Margaret Fritsch, Joe Heiler, Harry Herzog, Francis Jacobberger, Hollis Johnston, George Jones, Kenneth C. Legge, Roi L. Morin, John T. Schneider, Glenn Stanton, Ernest F. Tucker, C. H. Wallwork, Harrison A. Whitney.

Van Evera Bailey, Holman H. Barnes, Wyman K. Bear, Robert Fritsch, Ed. Green, Day Hilborn, Sidney Hayslip, Bernard Heims, Albert Hilgers, Dell F. Hinson, Bruce Kinne, Abbott Lawrence, Robert B. Morden, Richard Marlitt, Ejner E. D. Nielsen, Wm. C. Rief, Frank G. Roehr, Millard Schmeer, Jr., Ben Smith, Irving G. Smith,

Robert W. Turner, Warren Weber, George E. Wardner, Jr., Clarence H. Wick, Jack T. Woodmansee, George Whittier, Elmer Zeller.

Frank Allen, Robert Tyler Davis, Herry Freeman, Tom Frewen, Walter Gordon, Aimee Gorham, Lee Harold, Harrougher, D V. Jennings, Paul Laartz, Keith McGuire, Walter Gerke, William Silverthorn, Tom Taylor, John Richardson, Max Williams.

Everyone attending was greeted with a splendid array of photographs by Howles and Kotchik, who unfortunately were not present to enjoy the compliments and acclaim given their excellent work.

President Stanton presided at the business meeting preceding the dinner. The secretary was instructed to send the nominating petition endorsing Richmond Harold Shreve as a candidate for election to the Presidency of the American Institute of Architects for the Institute year 1941-42.

Following the report of the nominating committee, Mr. Jacobberger nominated Mr. Hollis Johnston as Treasurer. His nomination was ruled out of order. Mr. Johnston moved that the polls be closed and a unanimous vote be cast for the nominees. The motion was passed and the Secretary cast the unanimous vote for the incoming slate as follows: Roi L. Morin, President; Harry Herzog, Vice-President; Kennth Legge, Secretary; Francis Jacobberger, Treasurer; Glenn Stanton, Trustee; George Jones, Trustee; Herman Brookman, Trustee.

A letter from Vic Jones was read, inviting the Oregon Chapter to the Washington annual banquet and urged that as many as possible attend.

It was moved and carried that the Chapter be elected at large as delegates to the National Convention, to be held at Yosemite National Park, in May.

After a cocktail hour, members sat down to dinner with Ab. Lawrence presiding as toastmaster. After dinner, guests were introduced and took a bow.

Robert Tyler Davis of the Art Museum spoke briefly, saying the Art Museum had enjoyed its association with the architects to its present extent, but that he hoped this relationship would be further enhanced by more complete cooperation in the future. He hoped also that the architects would make their presence felt even more keenly at the Museum by coming around oftener and more informally, even to the extent of joining some of the classes.

Toastmaster Lawrence introduced Commissioner William A. Bowes as the guest speaker of the evening. Mr. Bowes spoke at length on the cooperation of the architects with the Building Department, and hoped that cooperation would flourish in the future as well as it had during the time he had been in office. He also talked on the possibility of a U. S. Housing Authority in Portland.

Unfortunately President-elect Morin had to catch a train to California and was excused from making his formal speech to the Chapter.

S. F. SECTION, A. S. C. E.

Two members of the San Francisco Section, A. S. C. E., have recently been given signal honor by the engineering profession. Frederick H. Fowler's elevation to the presidency of the American Society is heralded as a well deserved recognition not only because of his professional record but because of his society activities and work with other associations in the advancement of science. It is the first time in seventeen years the San Francisco Section has had one of its members elevated to the national presidency.

Another San Francisco Section member honored is James I. Ballard, editor of Western Construction News who has been promoted to managing editor of Engineering News-Record, with headquarters in New York City. The appointment necessitated Mr. Ballard's resignation as president of the San Francisco Section after an administration of short duration. Ballard is succeeded on Western Construction News by Dudley F. Stevens, and as president of the Section by Walter Dreyor. The new member of the Board of Directors is Ralph G. Wadsworth, who will also serve as Junior Vice-President of the Section.

"The Shasta Dam Project" was the subject of the February 18 regular bi-monthly meeting of the San Francisco Section, Tuesday evening, February 18, at the Engineers' Club. The principal speaker was Ralph Lowry, Construction Engineer, United States Bureau of Reclamation, in charge of the Kennett Division, Central Valley Project. His talk included a description of the mixing plant and the placing of concrete in the Shasta Dam and the preparation, transportation and handling of concrete aggregates.

* * *

The Junior Forum held its fifty-sixth regular meeting at the S. F. Engineers' Club Tuesday evening, January 28th, with thirty-eight members and guests attending. H. C. Medbery, outgoing chairman of the rotating committee, presided. Frank E. Bonner, newly elected Vice-President of the Section, represented the Senior Section.

The technical program for the evening was presented by two members of the Forum. Jack Kimball spoke on "Cannery Waste Studies for Palo Alto," and Harvey Ludwig described "The East Bay Cities Sewage Survey." Both subjects were well presented and lengthy discussions followed each presentation.

Following the technical program a general discussion was held on the subject, "Should the Civil Engineer Have a More Liberal Education" Alfred Finnila and Blair Burnson led the debate.

* * *

Russell G. Cone, engineer for the Golden Gate Bridge and Highway District, has been awarded the Construction Engineering Prize for 1940, for his paper, "Field Practice with Special Reference to the Golden Gate Bridge," which appeared in Civil Engineering. This is the second time that this prize has been awarded since its establishment in 1939.

ENGINEERS CONVENE IN JUNE

CALIFORNIA and the entire Pacific Coast region will preview this year many noteworthy advances in indoor climate control for human comfort and industrial protection when the heating, ventilating and air conditioning industry convenes in San Francisco for a series of engineering meetings in conjunction with the Pacific Heating & Air Conditioning Exposition in the Exposition Auditorium, June 16 to 20.

Reports received by the International Exposition Company, which has been conducting similar expositions biennially for a number of years, show that a substantial proportion of manufacturers are making product innovations at this time and are planning to participate, many already having made reservations. About three-fourths of the exhibition space available has already been booked, according to Charles F. Roth, manager of the Exposition.

The Exposition is to be held in conjunction with the summer meeting of the American Society of Heating & Ventilating Engineers, whose relatively large membership on the Coast is represented by local chapters in San Francisco, Los Angeles, Portland and Seattle. The Heating, Piping and Air Conditioning Contractors National Association will also meet during the same period.

E. O. Eastwood of Seattle has accepted the chairmanship of the Advisory Committee of the Exposition, which is sponsored by the engineering society. He succeeds W. L. Fleisher, who recently assumed new professional responsibilities as president of the A. S. H. V. E. Professor Eastwood is first vice-president of the Society and head of the Department of Mechanical Engineering at the University of Washington.

Demand for the conventions and air conditioning exposition on the Coast, which are the first of their kind to be held west of the Rockies, was generated by rising business trends throughout the Pacific Coast. To this area have been allocated 20 per cent of national defense contracts. That old standby—the shipbuilding industry—is doubling its capacity. A tremendous outburst of airplane production is impending. Mining and oil production are expanding. Extended pipelines are bringing natural gas to new communities. Many collateral and contributing activities are likewise showing improvement.

This improving condition has led to predictions indicating expenditures of more than $615,000,000 in new building construction in the eleven western states this year. That figure would represent about 15 per cent of the corresponding total forecast for the entire United States. It would reflect a gain of 6 per cent over 1940 for the region, compared with 4 per cent predicted for the country as a whole.

The projection, which is based on reliable formulas, suggests a 9 per cent increase in residential building and a 2 per cent increase in non-residential construction.

Renovations and improvements in existing buildings constitute another important factor in the outlook. Many such undertakings are anticipated as a result of the general business uplift, especially in restaurants, general office buildings and stores. Air conditioning is growing rapidly more important to all enterprises whose prosperity depends on serving the public amid comfortable surroundings. It is indispensable to all industries which require controlled atmospheres to safeguard their products and insure the uniform completion of many critical processes. The movement for maintaining equalized temperatures throughout the year in modernized homes has become a well defined vogue.

A comprehensive display embracing varied equipment for heating, ventilating, air conditioning and the insulation of buildings, as well as instruments and automatic control devices, is assured for the California Exposition, due to the fact that the Pacific region includes every variety of climate, as well as the whole range of residential, commercial, institutional and industrial construction problems.

COTTON HOUSE FOR GOVERNMENT

How a West Coast manufacturer has joined hands with the U. S. Department of Agriculture to help solve its problem of moving the South's giant cotton surplus was made known last month with the announcement that the Speedwall Company, 5035 First Avenue South, Seattle, Wn., had been selected to build "The Cotton House," a nationwide promotion feature of the Department.

The Speedwall Company, using cotton fabric covered fir plywood from the Pacific Northwest for all walls and ceilings, utilized approximately 4500 square feet of the textile in building this remarkable demonstration house. The design is modified Colonial 32 feet by 24 feet, with five rooms.

According to I. F. Laucks, president of I. F. Laucks, Inc., parent company of the Speedwall organization, the Exhibit House has a wall covering, insulation and floor covering all made of cotton. It is also furnished with cotton goods. On display in the patio of the Department of Agriculture Building in Washington, D. C., along with other examples of new applications of cotton designed to move the nation's surplus, the exhibit will later be shown on Pennsylvania Avenue in the Capitol city by the Washington Housing Authority and then will be taken on a six months' tour of the principal cities of the country.

FREEDOM THROUGH UNITY*

IF I had the power to choose what I would do for the next twelve months, I would ask to be assigned as a Fifth Columnist in Germany. For very definite reasons I choose to go to Germany and talk to a German friend, rather than to pick one in any other nation.

I will assume I am an American Fifth Columnist, sitting on the front porch of a cabin in the Bavarian Alps with my friend, Bill Claussen, a Forest Engineer in the Black Forest. Like most Germans, he has read much of America; he likes us and admires tremendously the way we do most things, in fact, he comes the closest to feeling natural when he is with an American. And I certainly like him. When we get past the saluting and the goosestepping and the hocus-pocus nonsense, we talk the same language. I am going to be a slightly different brand of Fifth Columnist than the usual run, for I will try to tell him the facts of the American Story "as is."

Looking out on the majestic panorama from our mountain retreat, far away from the distractions and fears of a tortured world, I might proceed somewhat as follows:

"Bill, you said you wanted to come up here in the mountains because you wished me to tell you quietly about the kind of life we lead in the United States and Canada. Naturally, I am more than glad to do this for I am certain that we actually have come closest to finding the answer for which the German people, and people everywhere, have been making such a costly search, in vain, these long years. I believe that you Germans can do as well, or even better than we have, once you get the full picture clearly, so here goes.

"During a period of a hundred years, 44,500,000 dissatisfied people chose to leave their ancestral homes in Europe and Asia to create a new life in the United States and Canada. From 1820 to 1920, fourteen million of these citizens left the present so-called Axis nations to go to America. These men and women continued to stream across the seaways by the millions until we were forced to close the gates.

"If the people of Europe should suddenly find themselves again free to travel wherever they chose, which way would the ships be sailing? The ports of New York, Montreal, Victoria, Tacoma and San Francisco would be utterly unable to handle the incoming immigrants. Why? Why did they come in such numbers for a hundred years? Why would they rush westward again if they could?

"Your leaders tell you that you are crowded, that you have no space in which to spread out, no 'Lebensraum.' Is it really so much a matter of physical environment, as you have been led to believe, is it really 'living space' for the body that you are after? Isn't it more than that, much more for which you are willing to make such colossal sacrifices? I am persuaded that it is living space for the spirit of each individual German,—'Lebensgeist,' living spirit, that impels you onward towards national destruction. Man possesses certain impelling instincts which underlie what we might call the Laws of Human Nature. Fuehrers, Duces and Commissars may be able to silence momentarily, in one man or a hundred million men the outward expression of their human instincts, but he cannot completely remove, or even permanently dull Man's Will to express these instincts.

"Let me give you an example of how these things work out in the United States and Canada. The population of our largest city, New York, is 7 million. There are in this city more Germans than there are in the German city of Altona; more Italians than there are in the Italian city of Palermo; more Greeks than there are in the Greek city of Mytilene; more Norwegians, Swedes and Danes than there are in Bergen; more Poles than there are in Cracow; more English, Scotch and Welsh than there are in Tottenham; and more Russians than there are in the Russian city of Gorky. And 30 per cent of all New Yorkers are non-Aryans. All these people live on the tiny island of Manhattan and in its nearby suburbs. 'Do they get on?' you ask, 'crowded together like that?'

"Well, recently we had a national election in the United States and 90 per cent of the men and women eligible to vote in New York City actually voted, and voted as they wished. During a period of several months preceding the voting the people of the entire country, including New York, were engaged in hurling word-bombs and throwing ideas at each other with machine-gun precision. And yet, as soon as the election was over, all the New Yorkers went about their business in good spirits, glad to abide by the will of the majority. And the same thing happened after Canada's recent national election.

"It seems to me, Bill, that the reason these 44,500,000 people left Europe and went West was because each felt instinctively that in America each could 'be himself' more freely and more fully than anywhere else.

"We have found in America, Bill, that when you deal with a man squarely and expect nothing but squareness

*Briefed from an address by Roderic Olzendam of the Weyerhaeuser Timber Company at the 33rd Annual Meeting of the Canadian Society of Forest Engineers, Victoria, B. C., February 7, 1941.

in return, you get it, nine times out of ten. When, on the other hand, you are holding something out on him, he knows intuitively that he should watch his step when he is doing business with you. One such slip on your part and you have a steep hill to climb back to the summit of mutual confidence from which you once enjoyed the broad view. It has been my experience with human nature that you get back pretty much what you give out. Unless our thinking and our action penetrate deep into the fundamentals of human nature we are just kidding ourselves if we think we are on the threshold of the answer when we have councils within councils and committees geared into committees and laws without number. In other words, men will not eliminate waste, they will not increase production, they will not be really interested in the success of the company in which they work, unless they want to. You cannot persuade them, even by paying them the highest wages in the world. The management of a company can tell employees time and again how fair and just they are, but to no avail. Each individual has got to feel within himself, he must know from personal daily experience, that the management is fair. Demonstration, not words, is what he is looking for.

"Now, let's finish the story. I don't want you to get back down the trail and upon second thought say to yourself: 'Well, we just talked theory, we didn't produce the solid evidence of facts.' So, Bill, let's look at some American facts and interpret those facts in order to reach Understanding for only on Understanding can we build Unity, out of which flows Freedom,—that Freedom for which men everywhere long, especially the men of Germany.

"Here are a few North American results produced under a system which tries to recognize the fundamentals we have been discussing. You Germans have always been pretty crazy about figures, so here are a few. I believe you want to get these same results that we have. You are striving for the same goals. I think you fought the last World War because you thought you'd attain these ends, but you didn't. Now you are out after them again. We, under our system, have reached many of these objectives, without killing each other. We not only get the results we are after, but we enjoy ourselves hugely along the way—the majority of us do. Listen to a few of these figures for the United States as a whole:

"In 1910 there were 16,372,000 savings accounts in the United States, whereas in 1941 there are 46,-000,000.

"The ownership of American industry in 1900 was in the hands of 4,400,000 people; today it is in the hands of 16,000,000 owners of securities.

"The policy holders of American life insurance companies numbered 7,725,000 in 1900; today there are 66,000,000.

"There is $165,000,000,000 worth of life insurance in the world today. The United States and Canada contain 7 per cent of the population of the whole world, yet together they have 70 per cent of all the life insurance in force in the world.

"The load of the worker is lightened in America by the use of electricity, which, in 1935 amounted to 1064 kilowatt hours per capita in Canada and the United States. In Germany, Italy and Soviet Russia it amounted to 215.

"In 1920 the American people used 10,000 electric refrigerators to keep their milk sweet and meat fresh; today there are 14,240,000 electrical refrigerators in the homes of the citizens of the United States.

"In 1920 there were only a thousand radio sets; whereas today there are 43,000,000—Just a sample of Freedom to speak and Freedom to listen.

"80 per cent of all the newsprint paper consumed in the world is consumed in the United States, which will give you some idea of the extent to which the American people are regularly kept informed of world events.

"In 1920 the American housewives had 1,800,000 electrical appliances to help lighten their work; in 1941 there were 117,000,000 electrical gadgets to bring joy to the woman in the kitchen.

"In 1900 the people of the United States were riding around in 8,000 automobiles; in 1941 they find it necessary to use 25,000,000 automobiles, exclusive of trucks and buses, in order to move freely over the face of the continent.

"In 1900 the American people said all they had to say through a million telephone instruments; today, in expressing ourselves, we have to use 20,400,000.

"Again here is the balance sheet of a Washington Lumber Worker—a man who works in one of the companies founded by one of the six million Germans who went to America believing that he could lead a freer, happier, more productive life there than he could in Germany. This Washington lumber worker's balance sheet is based on his own experience covering the 10-year period 1930-40:

WEYERHAEUSER LUMBER WORKER'S
BALANCE SHEET

Based on our own Experience
10-year period — 1930-40

	1940 as compared to 1930
Average hourly rate	Increased 36%
Weekly earnings	Increased 13%
Working hours	Reduced 16-2/3%
Cost of living	Declined 12%
Food, clothing & shelter purchasing power	25% more
Amount available, Group Life Insurance	70% more
Disability payments available to worker and his family	291% more

For 16% less effort he receives 25% more in wages, in security wages, and in the things wages will buy.

* * *

"It is perfectly fair to say, Bill, that this individual lumber worker has made greater progress in those things which count most with him and his family during

the last 10 years than has been made by any other worker under any other "ism" in any other country in any other period.

"Perhaps you would like to have me go further and tell you a few more of the social, economic and financial accomplishments made by the owners, managers and men of the companies founded by that German who left the Fatherland as a young man, because he felt he would have a wider scope for his talents in America than he ever would have in Germany. He did find freedom of expression for himself and for thousands of others. Some of the results for which he and his associates laid the foundations are these, and they are the same results you German people are searching for:

"During the last ten years this group of companies which he founded has drawn on the natural resources of Washington and Oregon by harvesting mature timber, valued on the stump at $12,000,000. This timber has been converted into forest products. The forest products created have gone to strengthen our American institutions, for homes, schools, churches, factories and farm buildings, and for paper with which to spread news and knowledge widely. In the process of creating wealth by changing these trees into forest products, all the men associated in the operations—owners, management and employees—have, by their combined efforts, replenished and built up the natural, economic and social resources of Washington, Oregon, and the United States to the extent of $310,000,000.00 in the following items alone:

"For wages and salaries to the people associated with them on the payrolls;

"For taxes which went to the support of schools, the building of roads, for unemployment compensation, old-age pensions, industrial insurance, medical aid, and for the carrying on of other processes of democratic government;

"For investment in reforestation, for identifiable research toward better utilization and the protection of existing forests from fire and disease;

"For re-investment in the building of plants and for additions and improvements in machinery and processes, thus creating 60 per cent more jobs and making existing jobs steadier, more satisfactory and more enjoyable to employees;

"For purchasing the 20,750 different kinds of materials and items necessary to carry on operations in woods, mills and offices;

"For transportation services to railroads and shipping lines in transporting forest products;

"For wages to capital—shareholders—for the use of their money, without which none of these constructive expenditures would have been possible.

"Putting it another way, during the last decade one group of men, organized by a former German citizen under the American Enterprise System, has steadily pumped the life blood of over $30,000,000.00 a year into the economic arteries of the nation. This creation of wealth and its widespread distribution was a rhythmic, year-in-year-out expanding and continuing contribution towards the progress and stability of the people of the country, and particularly of the people of the Pacific Northwest. This socially valuable accomplishment has taken place without destroying or diminishing the productive capacity of the land from which these crops of trees have been and will be successively harvested.

"We have been exploring in the United States and Canada these past 25 years, using our mills and offices as laboratories, and we know we have made a profoundly important discovery in the development of which we need the help which German men and women can give. We are just beginning to unfold the possibilities inherent in this discovery. I have given you a preview of some of the results already obtained. But these are nothing compared to what we believe we can attain with your help and the help of the men and women of Britain and Italy and Russia and Japan and France—in fact, of men and women everywhere who are terribly dissatisfied with the feeble progress made by Man these past 2,000 years as exemplified in our present world situation.

"Bill, I suggest something new, yet very old, as old as Man himself, an idea whose roots go down into the rich soil of Human Nature. I invite you to join the New North American Order—The Comradeship of Production.

"Each member of this Order will know that his companions in all positions recognize him as an Individual Personality. He will be alive to the fact that he actually plays a vital position hourly on a big, well-disciplined, well-trained team whose goal is the Creation of more necessities, more comforts, and more luxuries for more people. In the Comradeship of Production a man will be more likely to enjoy and enrich his life than under any other system, because it is built close to his nature, in fact, it evolved out of his own instincts and desires. In this brotherhood a man will find Constant Encouragement to be his best self, to make Progress; he will exercise his own initiative and his Creative Nature will find expression because his supervisors and his companions expect him to, and he expects them to; he will find that he can exercise his Freedom of choice as to how and where he shall worship, work, love and play; he will obtain a greater measure of Justice than he has experienced before; and all the time he will be enjoying the Comradeship of the men and women, in management and labor, who are working with him shoulder to shoulder in producing and distributing profitably for all concerned, the things all men want, and which their Creator intended them to have.

"Why don't you talk it up, Bill?"

* * *

Gentlemen, as forest engineers, you are seldom off balance. You have a poise that men have who work among the trees. You sway with the wind, but your

roots are down in the soil of solid fact. You know that the cycle of tree growth is beset with many dangers, yet from experience you know that when all is said and done, trees do grow when fertile seed is sown in good soil, when rain and sunshine come, when fire and disease are kept away.

Just so with the ideas of Man. Fertile, because based upon the truth, they have to fall on good soil, there to be watered with Infinite Patience and warmed with Understanding. In time, if reliable men like you all over the world will repeatedly interpret these ideas in such a way that nobody can fail to understand them, we shall, all of us together, grow the world's finest crop, a Crop of Free Men—Free because United under the Laws of Human Nature.

CENTRAL VALLEY PROJECT EXPENDITURES

Almost 6,000,000 tons of cement, steel, machinery, sand, gravel and other building materials, costing a total of $7,686,530, have gone into Central Valley Project structures so far, and expenditures for these supplies have been spread over 40 of the states.

California, the home state, has received about 50 per cent of the business, but seven of the ten states whose shares exceed $100,000 are east of the Mississippi River.

Purchases from middlewestern steel mills put Indiana in second place and Illinois in third, each with about $760,000 worth. Other states among the leaders are Colorado fourth at $625,000 and Oregon fifth at $452,000, followed in order by Pennsylvania, Alabama, Ohio, Wisconsin and Michigan.

The significance of the tabulation, according to R. S. Calland, acting supervising engineer of the Central Valley Project, is that virtually the entire country receives direct business benefit from the construction of Shasta Dam, Friant Dam, the Contra Costa Canal and other features of the project.

Mr. Calland said the figures include only expenditures by the Bureau of Reclamation for materials which become a part of the project structures. They do not include large quantites on order for future use, or expenditures by the various labor contractors for plant equipment such as cableways and cranes, and for items such as fuel, food, tools and explosives.

Project materials purchased up to January 1, 1941, comprise 238,000 tons of cement costing $2,417,414, all spent in California and Oregon; 46,000 tons of structural and reinforcing steel, costing $3,001,872; 5,000 tons of machinery such as pumps and gates, costing $393,045; and miscellaneous materials costing approximately $1,874,000.

CLARENCE STEIN AWARDED MEDAL

Clarence S. Stein of New York, nationally known for his work in community planning and housing, has been awarded the medal of honor of the New York City Chapter of the American Institute of Architects, it is announced by Frederick G. Frost, president of the Chapter.

Election of Mayor Fiorello H. La Guardia as honorary associate member of the Chapter is also announced. The Chapter, under its by-laws, may elect only one honorary associate each year. Mayor La Guardia was chosen unanimously, following the recommendation of a special committee.

The medal, bestowed annually for high professional achievement, was formally presented to Mr. Stein at a dinner commemorating the 84th anniversary of the founding of the Chapter, Tuesday evening, February 25, at the Architectural League in New York City.

Mr. Stein is a former chairman of the New York State Commission on Housing and Planning. During his administration New York accorded recognition to the principle that housing was a function of the state that required constructive as well as restrictive action. He has also served as secretary of the Committee on Housing of the New York State Reconstruction Commission.

NEEDED FOR DEFENSE WORK

An examination is announced by the United States Civil Service Commission to secure superintendents of general construction for work in the national defense program. Broad and responsible experience is required, and qualified persons are urged to file their applications at the Commission's Washington office where they will be rated as received until December 31, 1941.

There are several grades of positions with salaries ranging from $3,200 to $5,600 a year, less a $3\frac{1}{2}$ per cent retirement deduction. In general, the duties involve the direction of foremen, laborers, and mechanics on large construction projects. Appointees will inspect materials and workmanship to see that they conform to specifications and will organize men and materials for efficient construction operations.

Competitors must have had progressive experience in the field of general construction. Part of this experience must have been as superintendent on large projects involving excavation, reinforced concrete, steel, wood, and masonry, and supervision of three or more foremen of different building or construction trades. Engineering courses completed at a college or technical institute may be substituted for part of the general experience.

Further information and application forms may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D. C.

U. C. SCHOOL OF ARCHITECTURE

A separate School of Architecture with courses leading to the degree of bachelor of arts, has been authorized by the Regents of the University of California, upon recommendation of President Robert G. Sproul. At present the curricula in architecture is administered within the College of Letters.

Estimator's Guide

Giving Cost of Building Materials, Wage Scale, Etc.

Amounts given are figuring prices and are made up from average quotations furnished by material houses to San Francisco contractors. 3% Sales Tax on all materials but not labor.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

Bond—1½% amount of contract.

Brickwork—

Common, $40 to $45 per 1000 laid, (according to class of work).

Face, $90 to $100 per 1000 laid, (according to class of work).

Brick Steps, using pressed brick, $1.00 lin. ft.

Brick Veneer on frame buildings, $0.70 sq. ft.

Common f.o.b. cars, $14.00 at yard. Cartage extra.

Face, f.o.b. cars, $45.00 to $50.00 per 1000, carload lots.

HOLLOW TILE FIREPROOFING (f.o.b. job)

3x12x12 in.	$ 84.00 per M
4x12x12 in.	94.50 per M
6x12x12 in.	126.00 per M

Building Paper—

1 ply per 1000 ft. roll	$3.50
2 ply per 1000 ft. roll	5.00
3 ply per 1000 ft. roll	6.25
Sisalkraft, 500 ft. roll	5.00
Sash cord com. No. 7	$1.20 per 100 ft.
Sash cord com. No. 8	1.50 per 100 ft.
Sash cord spot No. 7	1.90 per 100 ft.
Sash cord spot No. 8	2.25 per 100 ft.

Sash weights cast iron, $50.00 ton.
Nails, $3.50 base.
Sash weights, $45 per ton.

Concrete Aggregates—

Gravel (all sizes) $1.45 per ton at bunker; delivered to any point in S. F. County $1.85.

	Bunker	Delivered
Top sand	$1.45	$1.85
Concrete mix	1.45	1.85
Crushed rock, ¼ to ¾	1.60	2.00
Crushed rock, ¾ to 1½	1.60	2.00
Roofing gravel	1.60	2.00
City gravel	1.45	1.85
River sand	1.50	1.90

Delivered bank sand—$1.00 per cubic yard at bunker or delivered.

SAND—	Bunker	Delivered
River sand	$1.50	$1.90
Lapis (Nos. 2 & 4)	2.00	2.40
Olympia Nos. 1 & 2	1.80	2.20
Healdsburg plaster sand	$1.80 and $2.20	
Del Monte white	50c per sack	

CEMENT (all brands, common, cloth sacks) $2.72 per bbl. f.o.b. car; deliv. $2.90 per bbl., carload lots; less than carload lots, warehouse or deliv., 80c per sack. (Less 10c per sack returned, 2% 10th Prox.)

Common cement (all brands, paper sacks) carload lots $2.52 per bbl. f.o.b. car; delivered, $2.70; less than carloads delivered, 75c per sack. Discount on cloth sacks, 10c per sack. Cash discount on carload lots, 10c a barrel, 10th Prox.; cash discount less than carload lots, 2%.

Atlas White, Calaveras White, Medusa White { 1 to 100 sacks, $2.00 sack, warehouse or delivery;

Forms, Labors average $40.00 per M.

Average cost of concrete in place, exclusive of forms, 35c per cu. ft.; with forms, 60c.

4-inch concrete basement floor ..... 12½c to 14c per sq. ft.

Rat-proofing 7½c

Concrete Steps ..... $1.25 per lin. ft.

Dampproofing and Waterproofing—

Two-coat work, 20c per yard.

Membrane waterproofing—4 layers of saturated felt, $4.50 per square.

Hot coating work, $1.80 per square.

Medusa Waterproofing, 15c per lb., San Francisco Warehouse.

Tricocel waterproofing.
(See representative.)

Electric Wiring—$12.00 to $15.00 per outlet for conduit work (including switches). Knob and tube average $3.50 per outlet.

Elevators—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing an automatic elevator in four-story building, $2800; direct automatic, about $2700.

Excavation—

Sand, 60 cents; clay or shale $1 per yard.

Teams, $12.00 per day.

Trucks, $22 to $27.50 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

Fire Escapes—

Ten-foot galvanized iron balcony, with stairs, $135 installed on new buildings; $145 on old buildings.

Floors—

Composition Floors—22c to 40c per sq. ft. In large quantities, 16c per sq. ft. laid.

Mosaic Floors—80c per sq. ft.

Duraflex Floor—23c to 30c sq. ft.

Rubber Tile—50c to 75c per sq. ft.

Terazzo Floors—45c to 60c per sq. ft.

Terazzo Steps—$1.60 lin. ft.

Hardwood Flooring (delivered to building)—

	⅝x2¼" T&G	⅜x2" T&G	⅞x2" Sq.Ed.
Clr. Qtd. Oak	$144.00 M	$122.00 M	$141.00 M
Sel. Qtd. Oak	118.00 M	101.00 M	114.00 M
Clr. Pla. Oak	120.00 M	102.00 M	115.00 M
Sel. Pla. Oak	113.00 M	92.00 M	107.00 M
Clr. Maple	125.00 M	113.00 M	

Wage—Floor layers, $10.00.
Note—Above quotations are all board measure except last column which is sq. ft.

Glass (consult with manufacturers)—

Double strength window glass, 20c per square foot.

Plate 75c per square foot (unglazed) in place, $1.00.

Art, $1.00 up per square foot.

Wire (for skylights), 40c per sq. foot.

Obscure glass, 30c to 50c square foot.

Glass bricks, $2.40 per sq. ft., in place.

Note—If not stipulated add extra for setting.

Heating—

Average, $1.90 per sq. ft. of radiation, according to conditions.

Warm air (gravity) average $48 per register.

Forced air, average $68 per register.

Iron — Cost of ornamental iron, cast iron, etc., depends on designs.

Lumber (prices delivered to bldg. site).

No. 1 common	$35.00 per M
No. 2 common	30.00 per M
Select O. P. common	40.00 per M
2x4 No. 3 form lumber	28.00 per M
1x4 No. 2 flooring VG	58.00 per M
1x4 No. 3 flooring VG	51.00 per M
1x6 No. 2 flooring VG	70.00 per M
1¼x4 and 6, No. 2 flooring	70.00 per M
Slash grain—	
1x4 No. 2 flooring	$45.00 per M
1x4 No. 3 flooring	42.00 per M
No. 1 common run T. & G.	35.00 per M
Lath	5.50 per M

Shingles (add cartage to price quoted)—

Redwood, No. 1	$1.25 per bdle.
Redwood, No. 2	1.00 per bdle.
Red Cedar	1.35 per bdle.

Plywood—Douglas Fir (ad cartage)—

"Plyscord" sheathing (unsanded)
5/16" 3-ply and 48"x96" ..... $32.50 per M

"Plywall" (wallboard grade)—
¼" 3-ply 48"x96" ..... $37.50 per M

"Plyform" (concrete form grade)—
⅝" 5-ply 48"x96" ..... $110.00 per M

Exterior Plywood Siding—

7/16" 5-ply Fir	$ 90.00 per M
Redwood (Rustic)	85.00 per M

Millwork—Standard.

O. P. $85.00 per 1000. R. W., $100.00 per 1000 (delivered).

Double hung box window frames, average with trim, $6.50 and up, each.

Doors, including trim (single panel, 1¾ in. Oregon pine) $8.00 and up, each.

Doors, including trim (five panel, 1⅜ in. Oregon pine) $6.00 each.

Screen doors, $3.50 each.

Patent screen windows, 25c a sq. ft.

Cases for kitchen pantries seven ft. high per lineal ft., $8.00 each.

Dining room cases, $8.00 per lineal foot. Rough and finish about 75c per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $17.50 per M.

For smaller work average, $35.00 to $45.00 per 1000.

Marble—(See Dealers)

Painting—

Two-coat work	per yard 42c
Three-coat work	per yard 60c
Cold water painting	per yard 10c
Whitewashing	per yard 4c

Turpentine, 65c per gal., in 5 gal. cans, and 55c per gal. in drums.
Raw Linseed Oil—95c gal. in light drums.
Boiled Linseed Oil—98c gal. in drums and $1.08 in 5 gal. cans.

White Lead in oil

	Per Lb.
1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	12c
Less than 500 lb. lots	12½c

Red Lead and litharge

1 ton lots, 100 lbs. net weight	11¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	12½c

Red Lead in oil

1 ton lots, 100 lbs. net weight	12¾c
500 lbs. and less than 1 ton	13c
Less than 500 lb. lots	13½c

Note—Accessibility and conditions cause some variance in costs.

Patent Chimneys—

6-inch	$1.25 lineal foot
8-inch	1.75 lineal foot
10-inch	2.25 lineal foot
12-inch	3.00 lineal foot

Plastering—Interior—

	Yard
1 coat, brown mortar only, wood lath	$0.50
2 coats, lime morter hard finish, wood lath	.85
2 coats, hard wall plaster, wood lath	.72
3 coats, metal lath and plaster	1.25
Keene cement on metal lath	1.30
Ceilings with ¾ hot roll channels metal lath (lathed only)	.90
Ceilings with ¾ hot roll channels metal lath plastered	1.80
Single partition ¾ channel lath 1 side (lath only	.85
Single partition ¾ channel lath 2 inches thick plastered	$2.90
4-inch double partition ¾ channel lath 2 sides (lath only)	1.70
4-inch double partition ¾ channel lath 2 sides plastered	3.30
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	2.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	3.40
3 coats over 1" Thermax nailed to one side wood studs or joists	1.25
3 coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	1.45

Plastering—Exterior—

	Yard
2 coats cement finish, brick or concrete wall	$1.00
3 coats cement finish, No. 18 gauge wire mesh	1.50

Wood lath, $5.50 to $6.50 per 1000.
2.5-lb. metal lath (dipped) .19
2.5-lb. metal lath (galvanized) .21
3.4-lb. metal lath (dipped) .22
3.4-lb. metal lath (galvanized) .24
¾-inch hot roll channels, $72 per ton.
Finish plaster, $18.90 ton; in paper sacks.
Dealer's commission, $1.00 off above quotations. $13.85 (rebate 10c sack).
Lime, f.o.b. warehouse, $2.25 bbl.; cars, $2.15
Lime, bulk (ton 2000 lbs.), $16.00 ton.
Wall Board 5 ply, $50.00 per M.
Hydrate Lime, $19.50 ton.
Plasterers Wage Scale $1.67 per hour
Lathers Wage Scale 1.60 per hour
Hod Carriers Wage Scale 1.40 per hour

Composition Stucco—$1.80 to $2.00 sq. yard (applied).

Plumbing—

From $70.00 per fixture up, according to grade quantity and runs.

Roofing—

"Standard" tar and gravel, $6.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $6.50 per sq.
Tile, $20.00 to $35.00 per square.
Redwood Shingles, $7.50 per square in place.
Copper, $16.50 to $18.00 per sq. in place.
5/2 #1-16" Cedar Shingles, 4½" Exposure 8.00 Square
5/8 x 16" — #1 Cedar Shingles, 5" Exposure 9.00 Square
4/2 #1-24" Royal Shingles, 7½" Exposure 9.50 Square
Re-coat with Gravel, $3 per sq.
Asbestos Shingles, $15 to $25 per sq laid.
Slate, from $25.00 per sq., according to color and thickness.
1/2 x 25" Resawn Cedar Shakes, 10" Exposure 10.50
3/4 x 25" Resawn Cedar Shakes, 10" Exposure 11.50
1 x 25" Resawn Cedar Shakes, 10" Exposure 12.50
Above prices are for shakes in place.

Sheet Metal—

Windows—Metal, $1.75 a sq. foot.
Fire doors (average), including hardware $1.75 per sq. ft.

Skylights—(not glazed)

Copper, 90c sq. ft. (flat).
Galvanized iron, 30c sq. ft. (flat).
Vented hip skylights 60c sq. ft.

Steel—Structural

$120 ton (erected), this quotation is an average for comparatively small quantities. Light truss work higher. Plain beams and column work in large quantities $97 to $105 per ton.

Steel Reinforcing—

$80.00 to $120.00 per ton, set.

Stone—

Granite, average, $6.50 cu. foot in place.
Sandstone, average Blue, $4.00, Boise, $3.00 sq. ft. in place.
Indiana Limestone, $2.80 per sq. ft. in place.

Store Fronts—

Copper sash bars for store fronts, corner, center and around sides, will average 75c per lineal foot.
Note—Consult with agents.

Tile—Floor, Wainscot, etc. — (See Dealers)

Asphalt Tile—18c to 28c per sq. ft. installed.

Wall Tile—

Glazed Terra Cotta Wall Units (single faced) laid in place—approximate prices:

2 x 6 x 12	$1.00 sq. ft.
4 x 6 x 12	1.15 sq. ft.
2 x 8 x 16	1.10 sq. ft.
4 x 8 x 16	1.30 sq. ft.

Venetian Blinds—

40c per square foot and up. Installation extra.

SAN FRANCISCO BUILDING TRADES WAGE SCALES

All crafts 8 hour day (except as otherwise noted) and 5 day week. Effective as of May 1, 1940.

CRAFT	Journeymen Mechanics
Asbestos Workers	$10.00
*Bricklayers	10.50
*Bricklayers' Hodcarriers	7.50
Cabinet Workers (outside)	10.00
Caisson Workers (Open)	8.80
Carpenters	10.00
Cement Finishers	10.00
Electricians	11.00
Elevator Constructors	12.00
Engineers (Portable and Hoisting)	10.00
Glass Workers	9.68
‡Housesmiths, Ornamental Iron (Shop and Outside)	10.00
Housesmiths, Reinf. or Rodmen	10.50
Ironworkers (Bridge and Structural—Engineers)	12.80
Laborers (Building and Common)	6.50
*Lathers	9.60
Marble Setters	10.50
Millwrights	10.00
Mosaic and Terrazzo Workers	8.00
†Painters	8.75
Pile Drivers and Wharf Builders	11.20
Pile Drivers Engineers	12.80
*Plasterers	10.00
*Plasterers (Hodcarriers)	8.40
Plumbers	11.20
Roofers	10.00
Sheet Metal Workers	10.00
Sprinkler Fitters	11.00
Steamfitters	11.00
Stair Builders	10.00
Stone Cutters	9.00
*Stone Setters	10.50
Tile Setters	11.00
Welders, Structural Steel Frame on Buildings	12.80
§Dump T-uck Drivers, 2 yards or less	7.00
§Dump Truck Drivers, 3 yards	7.50
§Dump Truck Drivers, 4 yards	8.00
§Dump Truck Drivers, 5 yards	8.00
§Dump Truck Drivers, 6 yards	8.50
Truck Drivers of Concrete Mixer Trucks:	
2 yards or less	8.00
3 yards	8.57
4 and 5 yards	9.14
6 yards	9.71

EXPLANATION:

*—6 Hour Day.

†—7 Hour Day.

‡—Term "Architectural Iron" no longer used. This craft "Ornamental Ironworker."

§—Dump Truck Drivers work 7 HOURS ON PUBLIC WORK, 8 HOURS ON PRIVATE WORK; starting time 7:30 A.M.

ARCHITECTS' WOMEN'S AUXILIARY

Meeting at the Hotel Bellevue, San Francisco, Wednesday, March 5, wives of San Francisco architects formulated plans for the establishment of the San Francisco Women's Auxiliary of the State Association of California Architects and nominated a committee to draw up the auxiliary's constitution. Mrs. Harold H. Weeks, who convened the meeting, presided.

Norman K. Blanchard, chairman of the Association's public relations committee, described the effective work now being carried out by the women's auxiliaries of the medical, legal and other professions.

"You can do much to aid the architectural profession in fulfilling its responsibility to society," he declared. "Our immediate local interests concern provision of adequate housing and recreational facilities for all, improved urban transportation and fire protection, city planning under the 'Master Plan' method and civil defense.

"Architects of New York, Massachusetts and other eastern states are working with defense councils there in planning full protection for civilians, including air raid precautions. We on the Pacific Coast should do likewise."

Blanchard suggested the auxiliary could cooperate in the architects' general program by helping to organize educational exhibits, prepare news letters, develop contact with PTA groups and schools and organize women's sessions at the association's conventions. A speakers' bureau for the auxiliary's monthly meeting should also be established.

Mrs. Irwin M. Johnson, president of the recently established East Bay women's auxiliary, outlined the organization of her group. Five committees—legislative, educational, program, membership and publicity—were working actively, she said, and the auxiliary already had over 50 members.

The gathering nominated Mesdames Weeks, Harry M. Michelsen, Wilbur Peugh, J. Francis Ward and William Knowles to draw up a constitution for presentation at the next San Francisco meeting on Wednesday, April 2.

Architects' auxiliaries are also being formed in Los Angeles and San Diego.

TRADITIONAL VS. MODERN DESIGN

The Section on Architecture of the Commonwealth Club of California, under the chairmanship of Irving F. Morrow, A.I.A., has for some time been investigating the case of traditional vs. modern architecture. In the course of this study the Section has been addressed by prominent architects, sculptors, painters, designers, educators, critics and laymen. The Section will present its report to the club next month. Prominent speakers yet to be announced will sustain and criticize the Section's report. In order to make this discussion available to the large number of interested persons who are not members of the Commonwealth Club, guests will be granted the courtesy of the club for this evening; attendance, however, is limited to men.

The meeting will be held from 5:15 to 9 p.m., Thursday, April 17, at the Bellevue Hotel. Advance tickets, which are necessary, may be obtained for $1.29 at the office of the Commonwealth Club on the second floor of the St. Francis Hotel, during the week of the meeting.

SOUTHERN CALIFORNIA CHAPTER

"Public Relations" was the subject of the February 11th meeting of Southern California Chapter at the Clark Hotel. George Meredith was the principal speaker.

An interesting discussion followed the announcement that the new Court House plans would probably be drawn by the County Mechanical Engineers' office.

This procedure seemed rather strange after the cordial relations which existed between officials and our committee during the study of the Civic Center. A resolution was passed calling for reconsideration and recommending the competition method of selecting an architect. The help of the Chapter was proffered in conducting such a competition. The State Association of California Architects, the Los Angeles Chamber of Commerce, the Associated General Contractors, and other groups sent in similar resolutions to the Board of Supervisors.

Dean Arthur C. Weatherhead, of U. S. C. Architectural School, introduced his guest, Dr. Kaufmann of Vienna. Dr. Kaufmann is a noted European architect and scholar who has studied and written much on the development of architecture from the time of the French Revolution to Corbussier. He addressed the meeting briefly and gave a bird's-eye view of this period of growth.

Another distinguished visitor and guest was Nicola D'Ascenzo of Philadelphia. Mr. D'Ascenzo is a member of the Philadelphia Chapter and world renowned for his stained glass work.

The March 11th meeting was held at the University of Southern California, taking the form of a social gathering and inspection of the new home on the University Campus of the Allan Hancock Foundation for Scientific Research, designed by C. Raimond Johnson and Samuel Lunden.

The gathering was preceded by a dinner at the Town and Gown at which city and county officials and their wives were guests. Others invited were members of the Structural Engineers' Association, Landscape Architects, Art Association, State Association of California Architects and the American Institute of Decorators.

LEGISLATION

Frederick H. Reimers, president of the State Association of California Architects, and Wayne S. Hertzka, vice-president, recently made a flying trip to Los Angeles, to discuss several legal matters of importance to the profession, and which are pending in the State Legislature.

MODERNIZED PRODUCTS

Brief Notes on New Materials and Equipment in the Building Industry.

520. FLUORESCENT LAMPS

The new type fluorescent lamps are given an excellent send-off in a broadside from the Mitchell Manufacturing Company. Details are given concerning installation, costs and specifications. Send for a copy by using the coupon below.

521. GAS FURNACE

Reznor Manufacturing Company has a broadside describing their new gas furnace No. K060 specially designed for small houses. Valuable information is given and should prove of interest to small residence owners.

522. RESEARCH PAPER

The Master Builders Company have issued a very fine little book—in point of fact it is a research paper entitled, "Application of the Principle of Dispersion to Portland Cement." Send for a copy—the coupon is for your use.

523. WINDOW UNITS

Spring Cushion Window Units manufactured by Rocky Mount Manufacturing Company are described in detail in a broadside well illustrated and containing some excellent information on this newer type of window unit.

524. WOOD PRESERVATIVE

From the Koppers Company comes information on "Kolineum," a highly refined creosote for use as a wood preservative. Full directions for dipping wood and for use of this product as an insecticide and weed killer are given. Send for a copy.

525. CREOSOTE

The above company also have data just out on further uses of some of their coal tar products. This data is put out in the form of a folder entitled "The Koppers Creosote Folder." Send for your copy by using the coupon.

526. STORAGE SPACE

The United States Department of Agriculture has a new bulletin No. 1865 on Closets and Storage Spaces; this booklet may be had for the sum of five cents direct from the superintendent of Documents, Washington, D. C.

527. SAFETY VALVE

The Imperial Brass Manufacturing Company has a small folder which contains descriptive matter on a new product—a combination gas outlet box and safety shut-off valve which is built into the wall. It is known as "Gas-O-Let." Send for a copy.

528. SPECIALTY EQUIPMENT

Automotive, portable and specialty equipment is detailed in a very fine booklet by the DeVilbiss Company. In fact this is also a complete catalogue of the newest in this type of equipment. There are many illustrations, price lists and details.

529.

The January-February magazine for Pittsburgh Plate Glass Company products is out and very interesting. There are many features in this little booklet for those interested in paints, glass and oils.

530. SHOWER RECEPTORS

Henry Weis Manufacturing Company have a new booklet and catalogue on shower bath receptors and cabinet showers. Illustrated in color, this is a very attractive booklet and those interested in such equipment should send for a copy.

531. LIGHT REFLECTORS

"Permaflector" lighting is the title of a new catalogue just put out by the Pittsburgh Reflector Company. Send for a copy.

532. PUMPS

Worthington Pump and Machinery Company have a new catalogue on equipment for use in buildings and institutions. Specifications and details are well grouped and there are several cuts and illustrations.

533. ALL STEEL

The "All-Steel-Equip" Company have a small but very complete pamphlet giving the latest details of their many products. This new catalogue became effective on February 1st and is right up to the minute. Send for your copy by using the coupon.

534. STORE FRONTS

Kawneer resilient store front sash, for the protection of show window glass, is described in "The Kawneer Front," a magazine published by the Niles, Michigan, Company, 10 times a year. Latest copy is now available. Fill out the coupon and a copy will be mailed posthaste.

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Check items on coupon, paste on letter head or postal card, and mail to Architect and Engineer.

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Name of Company.....

Street.....

City.....State.....

Mr. Architect:
Specify This Door Equipment if You Want To Please Your Clients.

The garage door, in many cases, is an integral part of the house, or can be seen from the street, therefore the importance of having this door designed to enhance the appearance of the home should not be overlooked.

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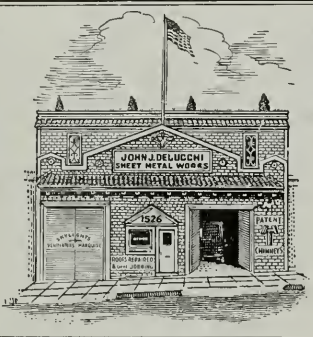

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ABRAM M. EDELMAN, ARCHITECT

Abram M. Edelman, architect, died suddenly January 21st at his home in Los Angeles. A native of Southern California, Mr. Edelman was the son of Rabbi Abram Edelman of the pioneer Temple Bnai Brith. He was born August 19, 1863, and received his professional training in leading San Francisco architects' offices. One of his first commissions was to design a $28,000 high school building in Los Angeles.

Among Mr. Edelman's contributions to the development of the South were:

(a) The first reinforced concrete building (Blanchard Hall), using salvaged street railroad cable for reinforcing foundations and walls.

(b) The second reinforced concrete "Class A" building—the Black Building at Fourth and Hill Streets.

(c) The first reinforced concrete "Class A" theater in California (the former Majestic), with balcony and gallery carried on cantilever trusses.

The crowning monument to his public and private construction designs is the new Temple B'nai Brith on Wilshire Boulevard, with its hundred-foot diameter concrete dome, "Class A" steel frame and reinforced concrete walls. On this beautiful structure, he was aided by David Allison, as consultant. Many and varied other buildings include the original Security Bank (Weil Building), Hollenbeck Old Peoples Home, Horace Mann High School and the L. A. Normal School (on site now occupied by the Public Library).

His abounding love for his fellow man found expression in helpful membership in many organizations—social, fraternal and professional. He was a charter member of the Southern California Chapter, American Institute of Architects; member Engineers and Architects Association of Southern California; member Jonathan Club, Chamber of Commerce, Merchants and Manufacturers Association, A. F. A. M. (of which he was a Past Master); Al Malaikah Shrine and the State Association of California Architects. He was the first president of the latter. He founded the firm of Edelman and Barnett, architects, in 1905. He was a member and officer of the National Board of Registration of Architects, active until three days before death.

ARCHITECTS MOVE

Frank S. Holland has moved to 1885 25th Avenue, San Francisco.

Harold Feree is now located at 2100 Virginia Street, Berkeley.

J. Robert Harris has moved to 3755 Laurel Canyon Boulevard, North Hollywood.

F. D. Harrington's new address is 2335 Charlton Street, Los Angeles.

V. W. Voorhees is in the Lloyd Building, Seattle, Washington.

Irwin W. Goldstone has opened a new office for the practice of the architectural profession at 1182 Market Street, San Francisco.

TIE IN HAMLIN COMPETITION

Two plans for remodeling Greeley Square at Broadway and 32nd Street in New York City tied for first place in the eighth annual Hamlin prize sketch competition, among third and fourth-year students of the Columbia University School of Architecture.

Duplicate gold medals will be awarded to Kenneth J. Brehm of 116-13 Jamaica Avenue, Richmond Hill, Queens, and Donald H. Newman of 2 Amsterdam Place, Mount Vernon, N.Y., whose designs for a fountain in the square were judged equally meritorious. The tie is the first in the history of the competition, established in 1934 in commemoration of the late Alfred Dwight Foster Hamlin, professor of the history of architecture.

Professor Hamlin was a member of the faculty of the school from 1887 until his death on March 21, 1926, serving several years as executive head. Beside his interest in architecture, he was active in social welfare.

L. A. ENGINEERS AND ARCHITECTS

The Engineers' and Architects' Association of Southern California, which has clubrooms in the I. W. Hellman Building, Los Angeles, recently held one of its most successful meetings. Among the speakers were Lowell Scherer of the Douglas Aircraft Corporation, W. L. Holladay of the George Belsey Company, E. C. Titus of the Owens-Illinois Glass Company, Walter Hall of the Fremont High School, Drs. Keeler and Herman, and George A. Heap, designing engineer for the State Highway Department.

The Association has appointed a nominating committee for the 1941 officers to be elected at the annual meeting in April, consisting of Messrs. Hirsch, Marsh and Vicklund.

Present officers are: President, David J. Nevin; vice-president, Daniel A. White; secretary, Lynn Hirsch; directors, Gerald Marsac, J. F. D. Withrow, Harold V. Peterson, Frank L. Stearns, E. R. Vicklund.

AWARDED D. S. DEGREE

Ferry C. Houghton, Director of the Research Laboratory of the American Society of Heating and Ventilating Engineers at Pittsburgh, Pa., was awarded an honorary degree of Doctor of Science by Olivet College, Olivet, Mich., at its annual Founders' Day convocation on February 24, 1941. Houghten was graduated from Olivet in 1913 with an A. B. degree.

Speaking on "The Challenge for Social Guidance in our Education," Dr. Houghten, in accepting the degree, advocated a broadening of the educational background of the engineer to include a greater appreciation of the social aspects, and a parallel broadening of the educational background of the social scientist to include some aspects of pure and applied science and to give an appreciation for the applications of the engineer in the development of material things and services.

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TREASURE ISLAND BUILDINGS

Slowly but surely the buildings are disappearing at Treasure Island. Dulien Steel Products Company, which holds the contract for liquidating the Exposition property, is offering to sell the buildings at nominal cost and already a number of structures have been purchased by Bay Region industries for use in expanding their plants. Some of the buildings are well fitted for manufacturing or storage purposes. Many of the structures range from 70 to 160 feet wide without a single obstruction in the floor (no posts) and represent the latest type of heavy industrial construction. Average length of the buildings is 100 to 1200 feet, all truss construction.

TACOMA SOCIETY ELECTS

W. W. Durham, superintendent of buildings and grounds for the Tacoma Public School System, was re-elected president of the Tacoma Society of Architects at the annual meeting, February 3. Earl N. Dugan of Sutton, Whitney & Dugan, was chosen vice-president and George Gove of Heath, Gove & Bell, was continued as secretary-treasurer. The Society meets every Monday noon at the University Union Club, 539 Broadway.

WALTER HUBER TAKES A PARTNER

Walter L. Huber announces the association of Edward M. Knapik as a partner in his practice under the name of Walter L. Huber and Edward M. Knapik, consulting engineers, 1 Montgomery Street, San Francisco. Mr. Knapik has been associated with Mr. Huber for some nineteen years.

RUNNING FIRE

(Continued from page 1)

I once sprained my ankle. My butler was a negro who had trained a prize fighter. "You all got to git some absorbinger, quick," he said. "Never heard of it, but hurry and get some," I said. He returned with a bottle of Absorbine, Jr. He pronounced it exactly as it was spelled. Perhaps that accounts for some of this phonetic spelling, but if I were to market a new type of carpet-laying machine I wouldn't call it "AZTAK." Or would I?

• *AND ANOTHER*

While we are panning the ad writers, let's not overlook the greatest of all modern cliches. The particular bete noir of the late Mr. Magonigle was that worn-out but still popular cliche "outstanding." That word is now a Cinderella, forgotten in the roar and tumult of "STREAMLINED." Everything today is streamlined. We have streamlined newspapers, streamlined plumbing, streamlined architecture, streamlined shoes for streamlined bunions, streamlined crime and streamlined virtue. I might also add that we have a streamlined race track. If heaven is streamlined, war will lose much of its terrors for some of us.

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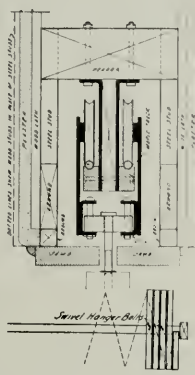

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FOR A STRONGER AMERICA

The following is a copy of a letter recently circulated through all manufacturing and office departments of the Stanley Works, New Britain, Conn. Signed by the company's president, C. F. Bennett, it is a notable expression of patriotic loyalty to our country—just the sort of expression that might be expected from such an able industrial executive:

TO OUR EMPLOYEES

I wish to call attention to the fact that, in our business at the present time, extreme emphasis must be put on the general public interest. This country faces a crisis such as the world has never seen. No well informed person doubts this. Our duty, therefore, is plain. We must and should do everything in our power to give the greatest possible service as quickly and as well as possible.

To this date our employees have done a good job on such work as has been allotted to us, but I wish to remind you that our very best may fall far short of the needs of the hour, and therefore I would like to have every Stanley Worker who in any way works on or moves items which are intended for defense, to do so with the feeling that he is privileged to strengthen America by each bit of extra thought and effort he can put into speeding on its way every article we are called upon to make.

Good Americans will all pull together!

C. F. Bennett, President.

February 3, 1941.

PLUMBING AND HEATING

Plastics enter the plumbing industry with the advent of a new shower head made of unbreakable plastic material, says the Plumbing and Heating Industries Bureau. The plastic shower head is made in a variety of colors to harmonize with the colors of the plumbing fixtures. The new shower head is so designed that it supplies ample water without excessive volume and wasting of hot water. It is readily adaptable to the majority of the existing shower supply lines.

Research in materials having a high resistance to heat is responsible for the development of a new faucet washer which will withstand a temperature of 300 degrees, says the Plumbing and Heating Industries Bureau. Other features of the new washer are high tensile strength, abrasion resistance, and distortion resistance.—Exchange.

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SOLUTION TO YOUTH PROBLEM

San Francisco's problem of juvenile delinquency, as illustrated by the plight of the "Dead End Kids," calls for long-range planning for better living conditions as well as the immediate provision of adequate, properly supervised playgrounds and other recreational facilities.

This view was advanced by the State Association of California Architects, Northern Section, in a statement urging the provision of larger playing areas for all future city schools and the re-establishment of proper playground equipment. Greater utilization of present school buildings for supervised evening recreation, including Friday night dances, was also advocated by the architects' group.

"These immediate measures should be paralleled by long-range planning to end overcrowding within San Francisco's older housing areas," declared Norman K. Blanchard, Chairman of the Architects' Public Relations Committee. "The provision of better housing for our low income groups, and the zoning of certain adjacent areas with complete recreational facilities, will do much to reduce juvenile delinquency and create sounder civilian morale.

"This program could well be incorporated in San Francisco's proposed Master Plan for a greater and better city," Blanchard added. "As the project concerns civilian morale, it would in this time of national emergency, be a vital factor in the civil defense of our city, State and nation. The expert technical knowledge which the architectural profession can provide would be an important contribution to this program for civilian safety and better social living."

COLUMBIA STEEL WAREHOUSE

Construction of a new steel warehouse to form the distributing hub of Columbia Steel Company products throughout Northern California has been started at Sixteenth and Folsom Streets, San Francisco, and upon completion in December, various storage and distributing depots of the company will be consolidated under one roof, covering nearly an entire city

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Among the storage houses previously in use was that known as the Risdon property at Twentieth and Illinois Streets which was owned by Columbia Steel Company and recently acquired by the Navy Department in line with accelerated national defense activity.

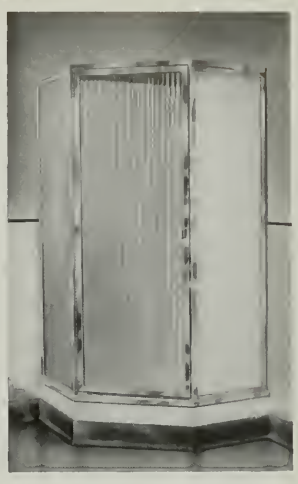
The new warehouse will be of steel construction on a concrete foundation replacing a present unsightly frame structure, and will be entirely fireproof.

NEW HEATING GUIDE

Recent authoritative and useful engineering data has been included in the 19th edition of the Heating, Ventilating, Air Conditioning Guide for 1941. All of the 46 chapters have been rearranged and grouped into seven sections to provide a more logical arrangement and to improve the correlation between the Technical and Catalog Data Sections of the book.

Twenty-one chapters have been reviewed or rewritten for the new edition and many minor changes have been made in the other 25 chapters. An entirely new chapter on the Thermodynamics of Air and Water Mixtures is presented, based on the most recent information available on the subject. In addition to the Bulkeley Psychrometric Chart a new Mollier Diagram for Moist Air is included for use in analyzing air conditioning processes. The chapters on Cooling, Dehumidification and Dehydration, and Refrigeration are completely new and include the latest information available.

The new 1941 edition of The Guide comprises 46 chapters of technical data with 832 pages, the Catalog Data Section comprising 312 pages, the Roll of Membership of the Society and complete indices to the Technical and Catalog Data Sections. This handbook is again bound in a flexible blue cover with gold stamping, and is available at $5.00 per copy. A limited number of thumb-indexed copies will be available at $5.50 each for those who desire this particular feature.



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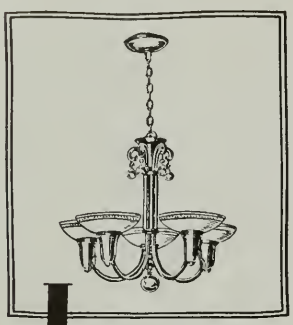

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NORTHERN CHAPTER MEETING

The regular monthly meeting of Northern California Chapter, A.I.A., was held at the St. Francis Yacht Club, San Francisco, on Tuesday evening, February 25, President A. Appleton presiding.

Guests present included Messrs. Leo Reisman, conductor of an orchestra of international repute; Frederick Olmsted, sculptor; Lucien Labaudt, painter; Thomas D. Church, landscape architect, and Albert Schroepfer.

There being no business, Mr. Appleton introduced the various guest speakers, explaining that each would speak on the relationship between Architecture and the Allied Arts as seen through the eyes of his particular Art.

Mr. Reisman was first, reading a very interesting and thoughtfully prepared paper on the design of ball rooms, mentioning several serious faults he had encountered in the various rooms in which he has conducted. His suggestions as to correcting the noticeable defects were very well analyzed, and Chapter opinion held his treatise to be highly commendable.

Mr. Olmsted discussed the effects of modern conditions and requirements upon the "Architecture and Sculpture of Today," recognizing the fact that in wall treatments it is quite often difficult to determine where architecture stops and sculpture begins. His presentation was quite comprehensive, and afforded a good picture of the problems confronting the sculptor and architect alike, whether working singly or in collaboration.

Mr. Labaudt proved a most enjoyable speaker. His enthusiasm and complete grasp of the role that painting plays in the arts won his audience instantly. He stressed particularly the necessity of relying upon the individual artist to depict his own thoughts without trying to bind him to a definite commitment beforehand as being the only way in which we can have the best in art today.

Mr. Church presented briefly the problems facing the landscape architect, and emphasized the special need for the collaboration of the architect in order to achieve the finest result.

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PLASTIC FLOW CONCRETE

A scientific theory that had been universally accepted by engineers for 34 years has been toppled into the discard, opening up possibilities for millions of dollars in savings in the nation's construction industry.

The man who did the toppling is George A. Maney, professor of civil engineering in Northwestern University's new technological institute.

And what he proved false is a theory as to the nature of concrete that has been described in engineering language as "plastic flow."

Engineers have long known that concrete will shrink in volume or dimension through the drying out of its moisture content. Concrete that carries a sustained load, as in the case of a building or bridge, will not only show this usual shrinkage, but will also tend in time to warp, crack, or change its shape. To this extra change that occurs under load, engineers have given the name "plastic flow," on the theory that concrete is a plastic material that "flows" and is changed in shape as the result of load or pressure.

More than 100 research papers on "plastic flow" have been written by engineering authorities in the field, most of them during the past ten years.

Prof. Maney challenged their views in 1930, and after various experiments proved to his own satisfaction that "plastic flow" did not exist and was merely a figment of the engineer's imagination. His conclusions, however, were not only ridiculed by engineers, but leading publications in the field refused to publish his research.

Nothing deterred, he continued his investigation during the intervening years, conducting numerous experiments for studying the action of concrete under conditions of load. The final result is a report, made public recently, which demolishes the "plastic flow" theory, and represents the most revolutionary of any conclusions made on the basis of experimental evidence in the field of concrete since plastic flow was first discussed about 1907.

As is the case with most discoveries, the principle underlying Prof. Maney's

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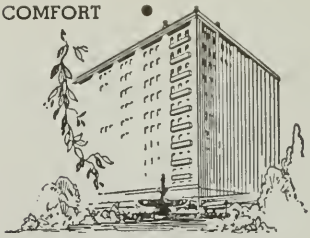

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conclusions is very simple—so simple in fact that engineers refused to believe it. The warping, cracking, and change of shape that occurs in concrete under load is not the result of "plastic flow," but merely of non-uniform shrinkage. And this non-uniformity in shrinkage occurs simply because the surface of a concrete body loses its moisture much more quickly than does the inside.

Prof. Maney believes that this new conception will have an important effect on the cement and concrete industry which, next to steel, is the largest in the construction field.

"We are now definitely certain that concrete is an elastic, not a plastic material," he said. "We have proved that what has heretofore been regarded as an inherent fault of this material, even by the manufacturers themselves, does not exist.

"We have now cleared the field of a gross misconception, and are in a position to attack the problems of concrete from an entirely new approach. This opens up new meaning for the principle of keeping moisture in concrete. Eventually, by this means, we may entirely eliminate the warping and change of shape that has wrongly been considered an inherent fault of the material itself.

"The result of a successful solution to this problem will be a tremendous increase in the use of concrete as a building material, and the saving of millions of dollars a year in the maintenance cost of concrete structures."

Prof. Maney is a nationally recognized authority in the field of reinforced concrete, and the designer of various important structures, including the $4,000,000 Santa Fe Terminal building of Dallas, Texas, which at that time was the tallest concrete structure in the country. He is the author of "Statically Indeterminate Stresses," published in 1936. Several years ago, he was awarded the Wason Medal of the American Concrete Institute for the most valuable research paper of the year.

DR. MORLEY IN SOUTH AMERICA

Dr. Grace Morley, director of the San Francisco Museum of Art, is now in South America completing the survey of contemporary art started last year for the Golden Gate International Exposition. This time she will visit not only Colombia, Ecuador, Peru, Bolivia and Chile, but also the East Coast—Argentina, Brazil and Venezuela. She will confer with artists, art school teachers and museum directors, and should have an interesting report to make when she returns at the end of the current month.

FRENCH MASTERPIECES

The California Palace of the Legion of Honor announces the acquisition of a distinguished example of the work of Louis Le Nain (1593-1648), one of the great masters of the French School. The painting in question, "Peasants in Front of Their House," for many years in the collection of the Dukes of Rutland at Belvoir Castle, has just been acquired from M. Kneedler & Company, through the bequest of the late Mildred Anna Williams and will be added to the collection which bears her name.

Referring to the picture, Thomas C. Howe, Jr., Director of the California Palace of the Legion of Honor, writes: "This beautiful work by Le Nain is an unusually welcome addition to the Williams Collection, for, while the Museum's representation of 17th century European painting is a comparatively generous one, this is the first outstanding example of the French School of that period to enter the collection.

"The works of Louis Le Nain and his two brothers—Antoine and Mathieu—are eloquently expressive of that steady current of realism which has, with varying intensity, persisted throughout the course of French painting. It is not the casual realism of so many of their Dutch contemporaries nor the stark, satirical realism of their Italian confreres. On the contrary, the Le Nains—and particularly Louis, the most gifted of the trio—endowed their scenes of humble peasant life with a quiet dignity and an imperturbable serenity which impart to them a sober monumentality rarely encountered in the treatment of such subjects. Great distinction of color is also an essential characteristic of Louis Le Nain's work and all of these qualities are inherent in the painting referred to above.

THE MASTER BUILDER

(Continued from page 13)

building industry, we must contribute to its growth—not through the medium of laws but through the medium of ability and practice.

To some, this idea may appear to be digressing from the ethics of our profession, but it must be realized that when ethics cease to be strengthening, they no longer have value. The same can be said for our laws. Laws that merely protect us are weakening, great laws stimulate development. And develop we must, to see the day when we are the undisputed Master Builders.—Bulletin, Michigan Society of Architects.